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Aktiv-entdeckendes Lernen
im Mathematikunterricht
bei Schülern mit geistiger Behinderung

Anhang: Kodierungen

ISBN 978-3-89896-355-8

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Mellinghofer Straße 126, 46047 Oberhausen
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Kodierungen

Im Folgenden sind sämtliche Kodierungen aller Spiele abgedruckt. Zum besseren Verständnis sind ihnen noch mal die Kodierungen vorangestellt, wie sie in Kapitel 6 bereits erläutert wurden:

Für das **Autospiel**:

a) strategische Schritte

A-S	5	Lösung erkennen
	4	Sackgasse
	3	Kreuzen
	2	Ausweichen
	1	Ausgangssituation

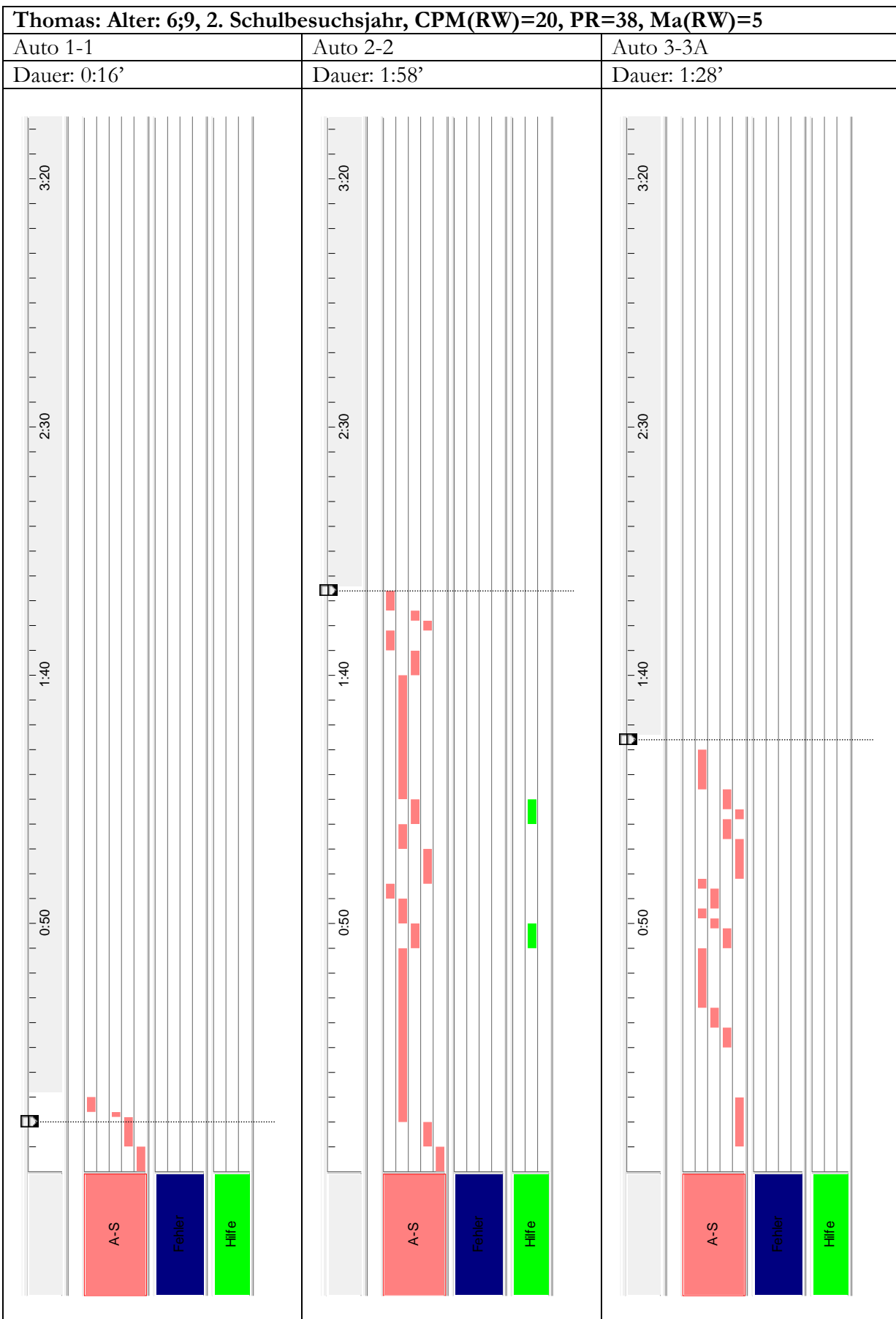
b) Fehler

Fehler	4	Ziel verändern (aus dem Spiel gehen)
	3	Springen
	2	Zwei Autos in Bucht
	1	Straße verlassen

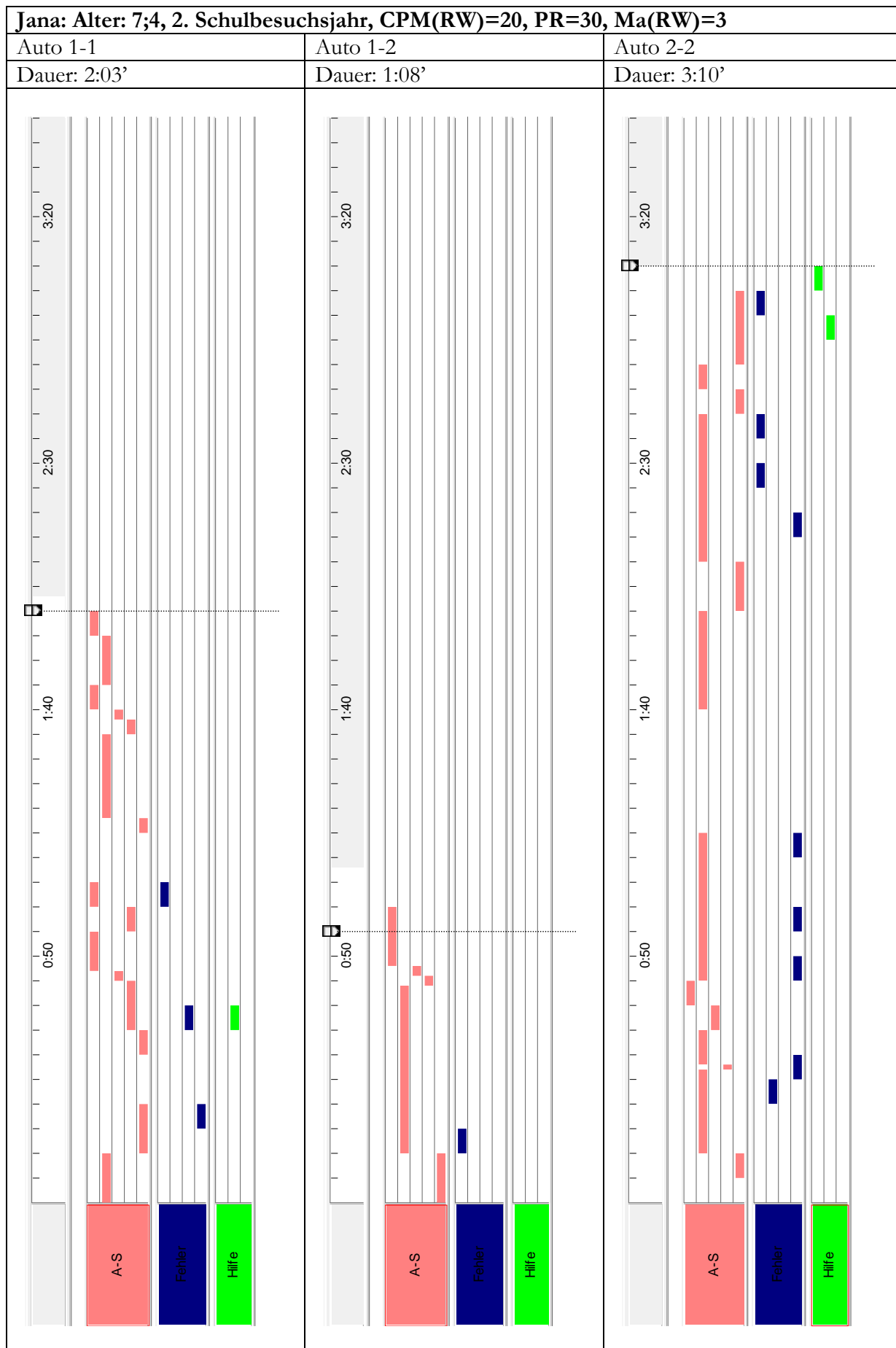
Für das **Schiebespiel**:

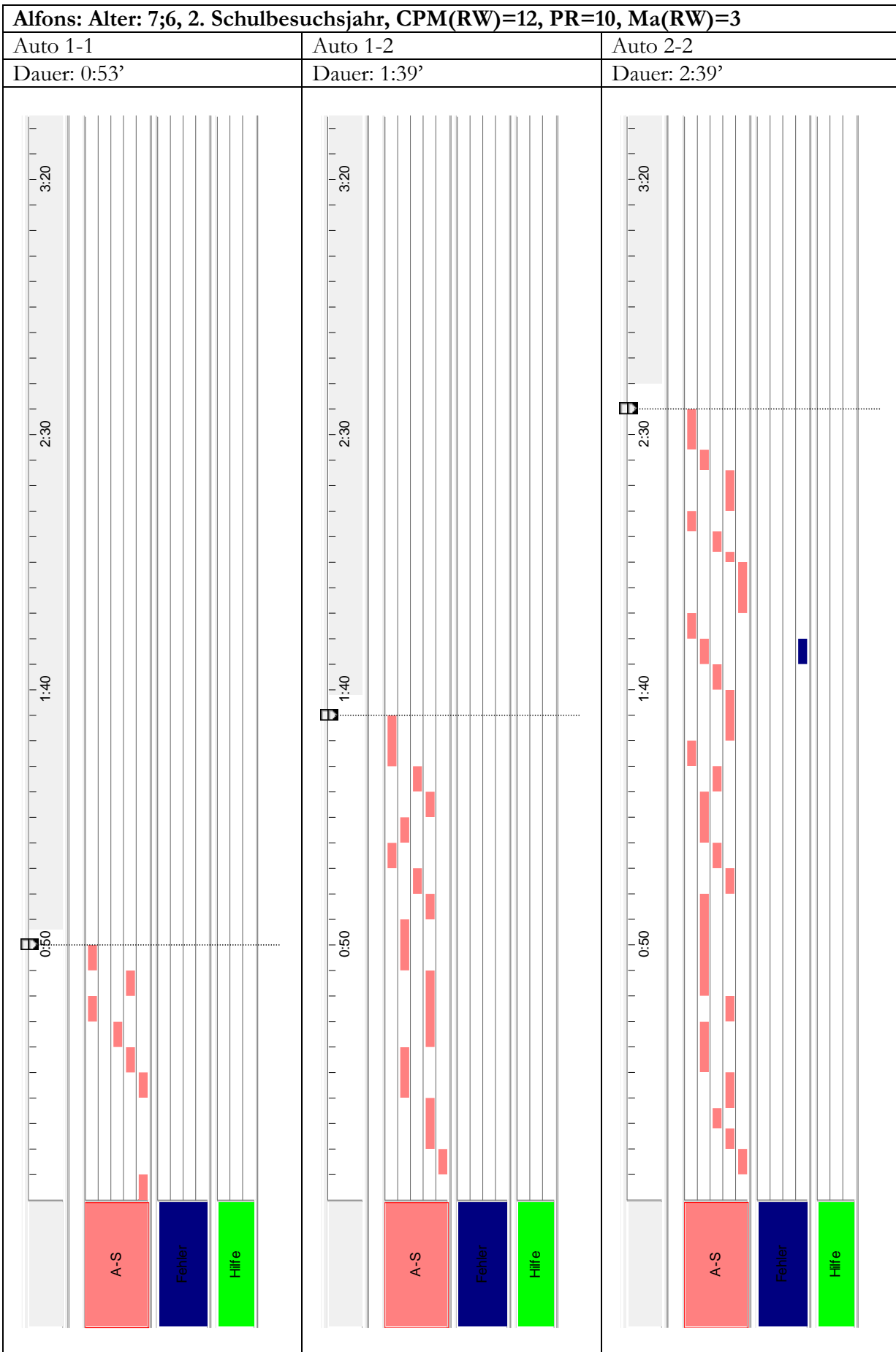
Fehler

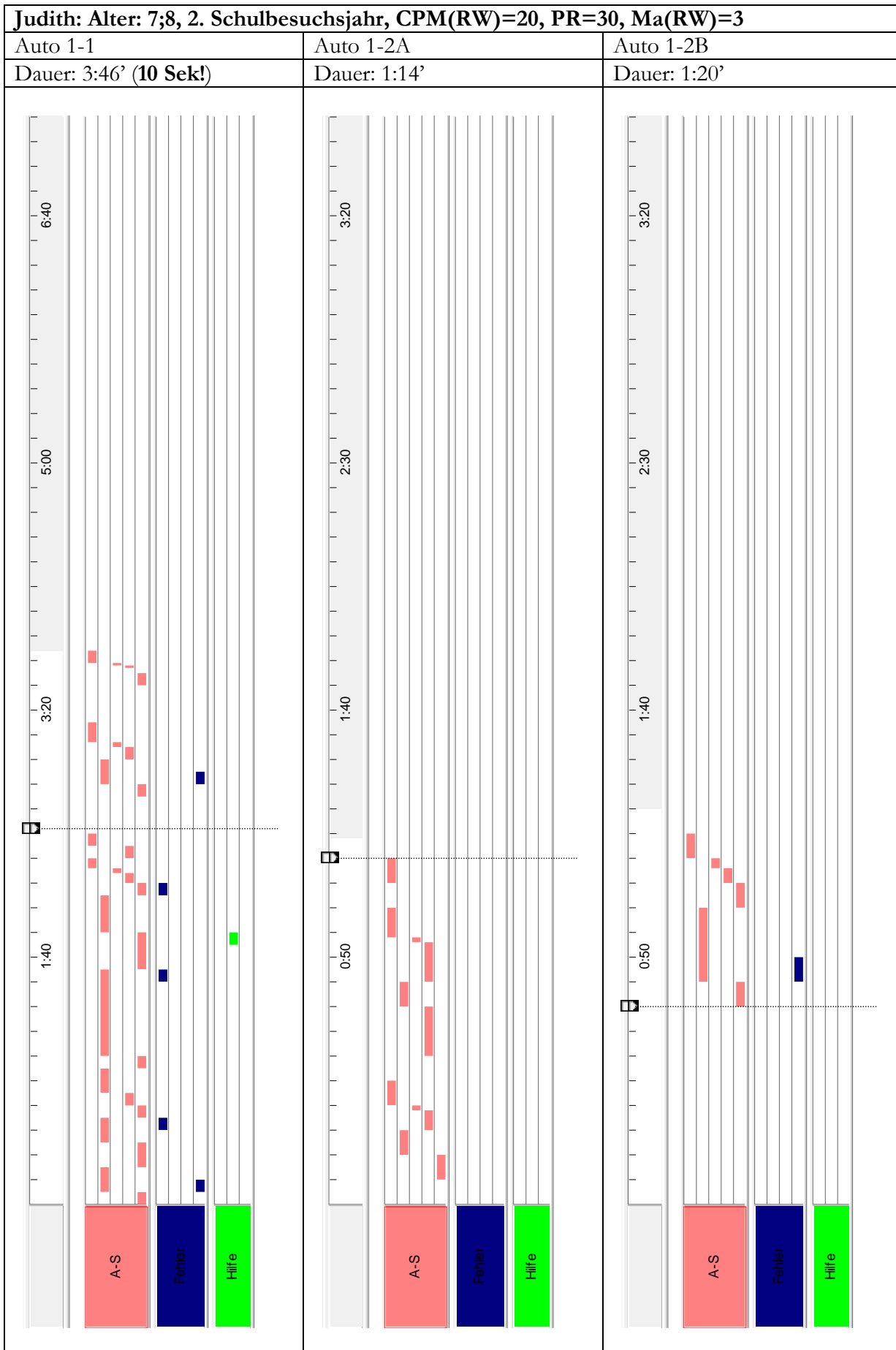
Fehler	4	Ziel verändern (aus dem Spiel gehen)
	3	Springen
	2	Zwei Plättchen in einem Feld
	1	Diagonal schieben

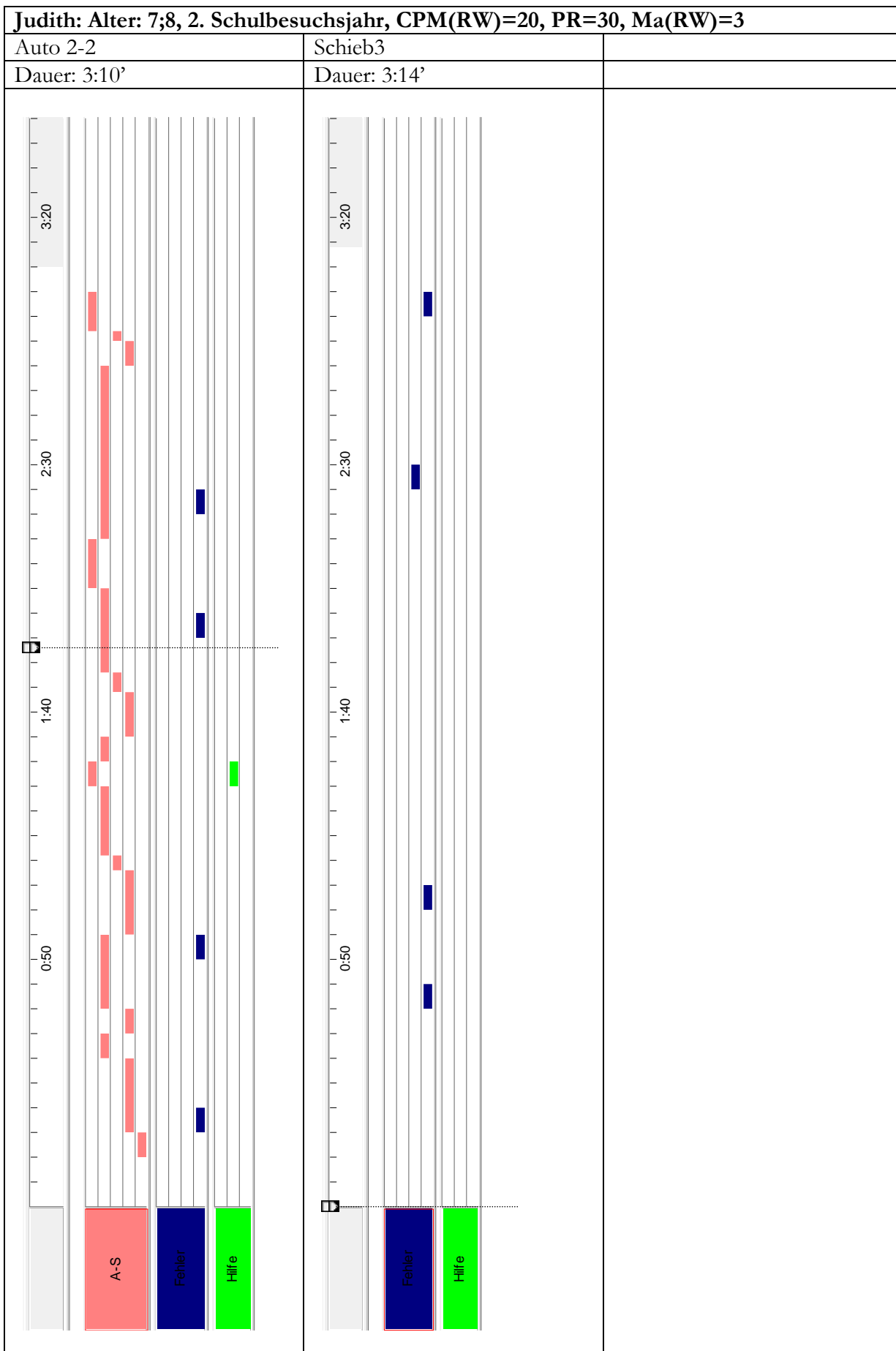


Thomas Alter: 6;9, 2. Schulbesuchsjahr, CPM(RW)=20, PR=38, Ma(RW)=5		
Auto 3-3B	Schieb3	Schieb5
Dauer: 2:09'	Dauer: 1:29'	Dauer: 3:15'
<p>Timeline for Auto 3-3B (Dauer: 2:09'). The vertical axis shows time from 0:50 to 3:20. A grey bar at the top indicates the total duration. A small square icon is at the 1:40 mark. The activity 'A-S' (red) starts at 0:50 and ends at 1:40. 'Fehler' (blue) starts at 1:40 and ends at 2:09. 'Hilfe' (green) starts at 2:09 and ends at 3:20.</p>	<p>Timeline for Schieb3 (Dauer: 1:29'). The vertical axis shows time from 0:50 to 3:20. A grey bar at the top indicates the total duration. A small square icon is at the 1:40 mark. The activity 'Fehler' (blue) starts at 0:50 and ends at 1:29. 'Hilfe' (green) starts at 1:29 and ends at 3:20.</p>	<p>Timeline for Schieb5 (Dauer: 3:15'). The vertical axis shows time from 0:50 to 3:20. A grey bar at the top indicates the total duration. A small square icon is at the 1:40 mark. The activity 'Fehler' (blue) starts at 0:50 and ends at 3:15. 'Hilfe' (green) starts at 3:15 and ends at 3:20.</p>



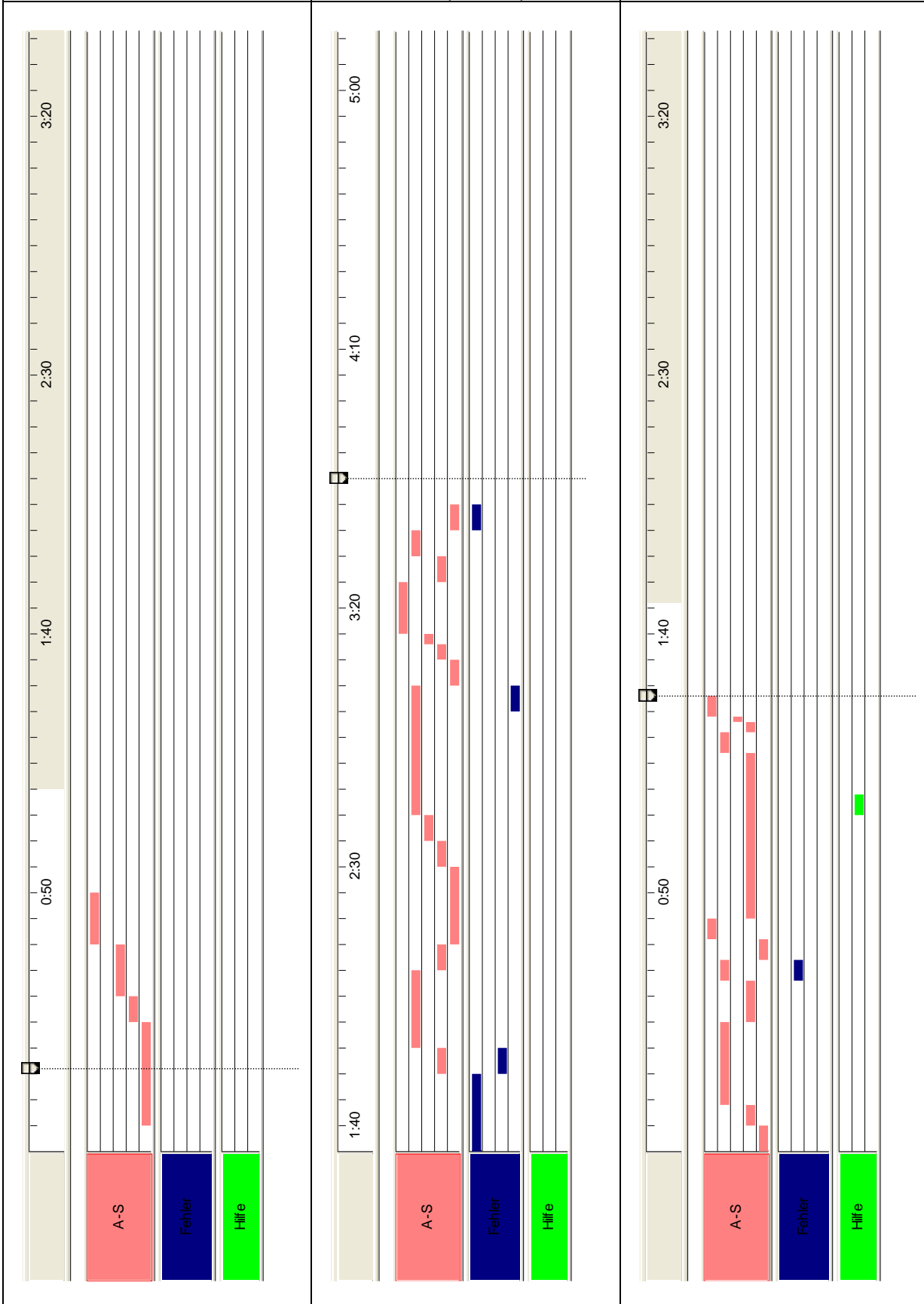




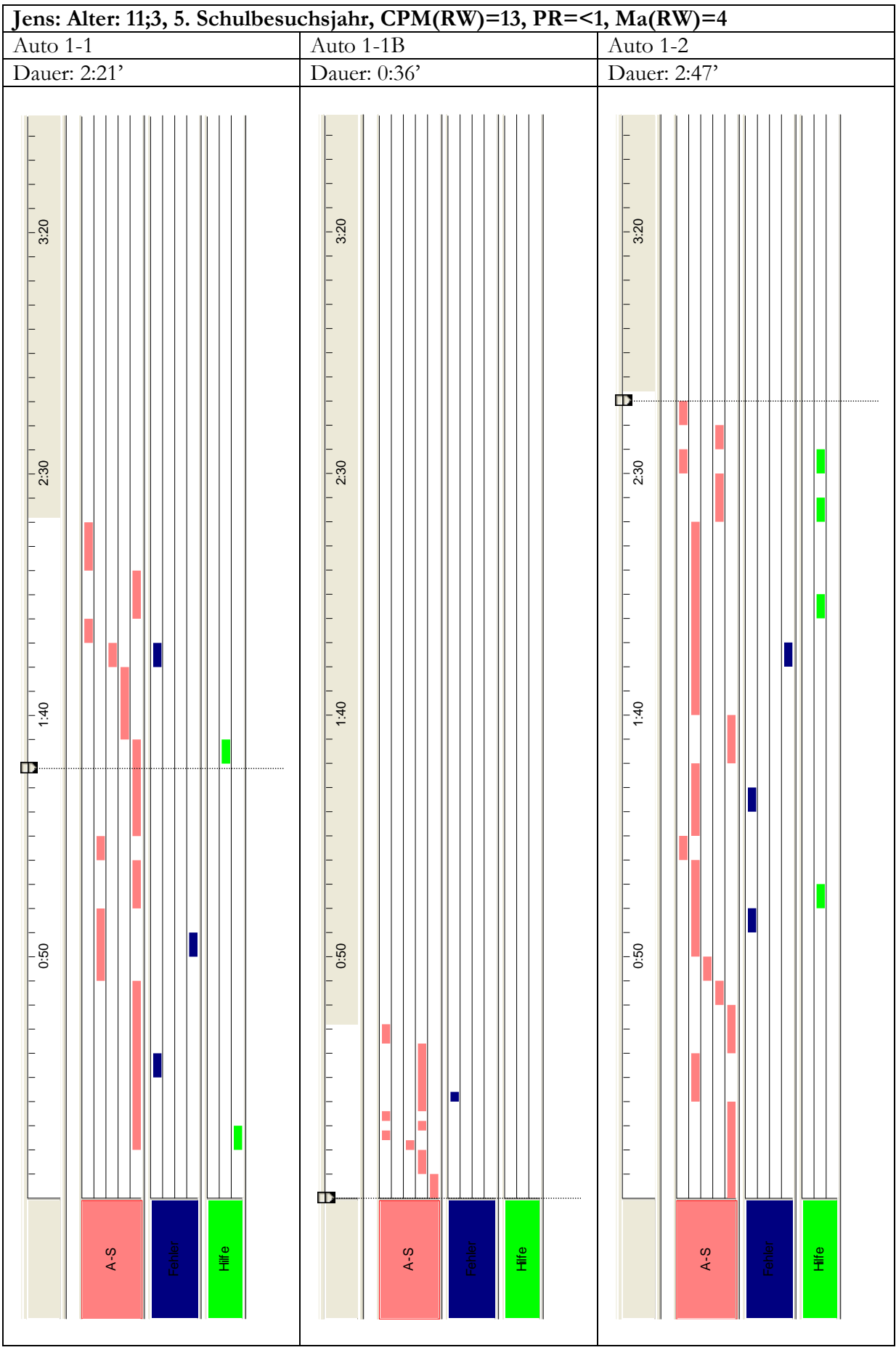


Joseph: Alter: 9;5, 4. Schulbesuchsjahr, CPM(RW)=20, PR=5, Ma(RW)=6

Auto 1-1	Auto 2-2	Auto 2-2B
Dauer: 1:10'	Dauer: 6:13' (10 Sek!)	Dauer: 1:46'



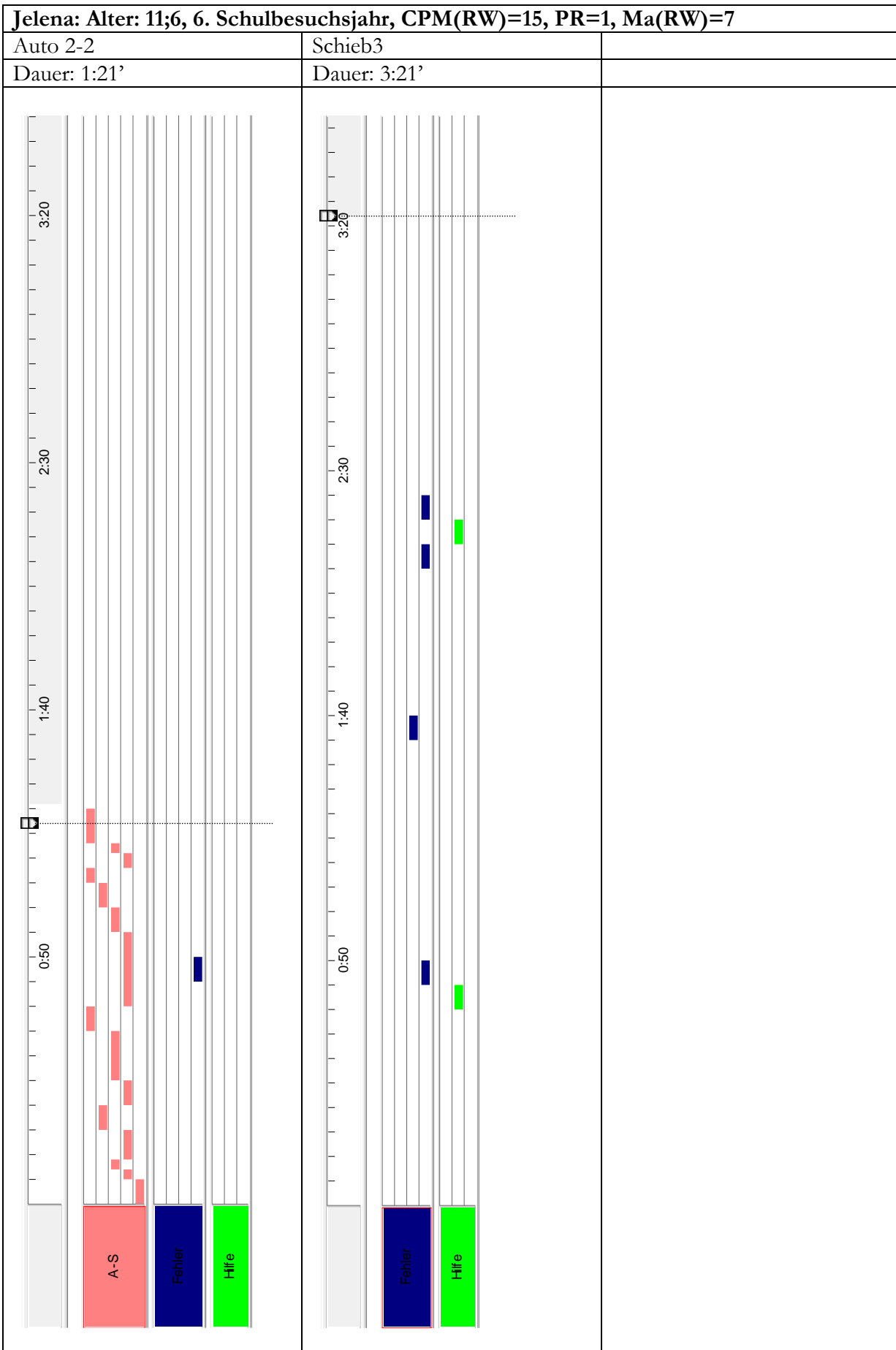
Joseph: Alter: 9;5, 4. Schulbesuchsjahr, CPM(RW)=20, PR=5, Ma(RW)=6		
Auto 3-3 (abgebr.)	Schieb3	
Dauer: 2:26'	Dauer: 2:13'	
<p>Timeline for 'Auto 3-3 (abgebr.)':</p> <ul style="list-style-type: none"> 0:50 - 2:26: A-S (red bar) 0:50 - 1:05: Fehler (blue bar) 0:50 - 1:05: Hilfe (green bar) 	<p>Timeline for 'Schieb3':</p> <ul style="list-style-type: none"> 0:50 - 1:05: Fehler (blue bar) 0:50 - 1:05: Hilfe (green bar) 	

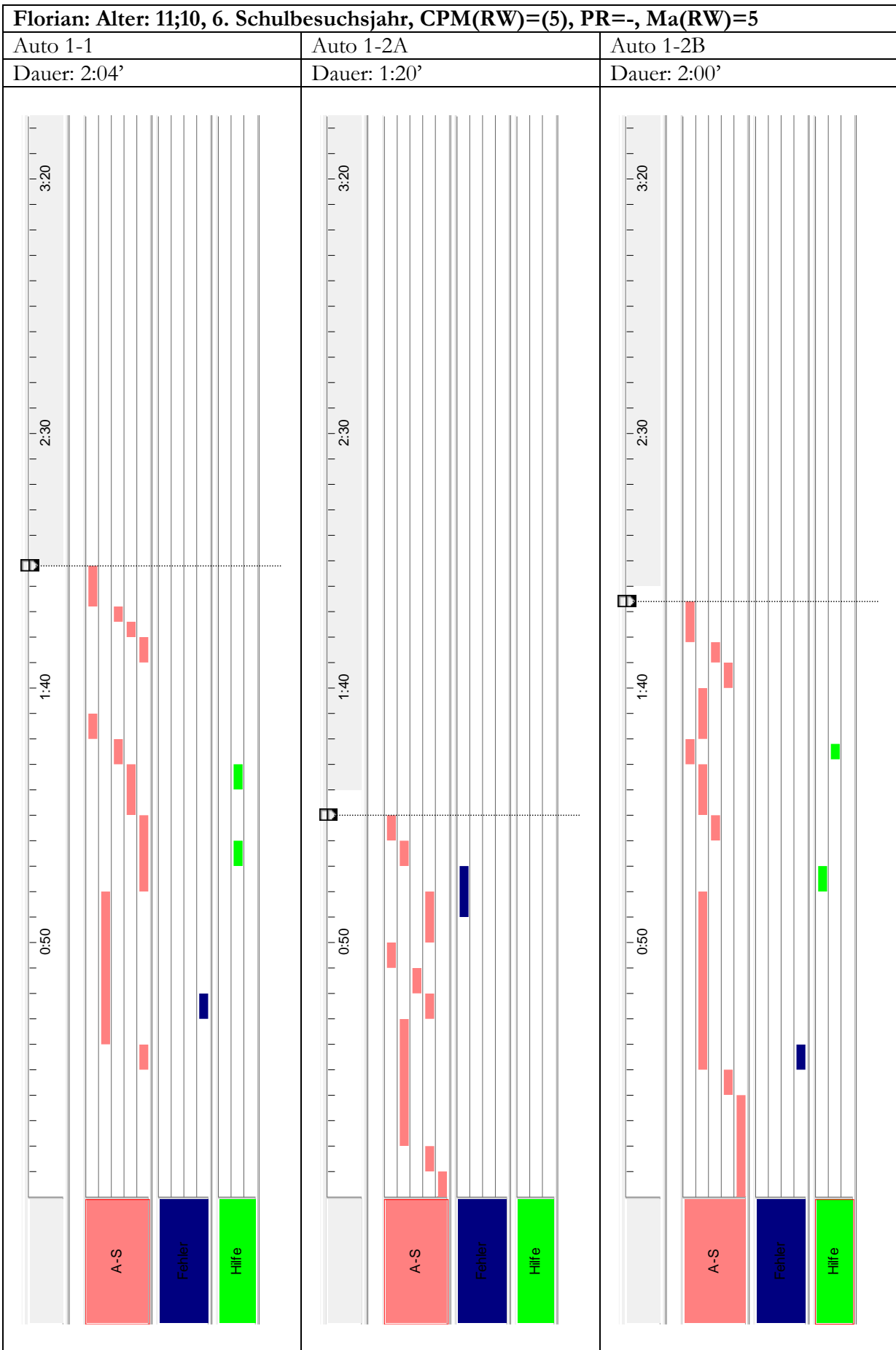


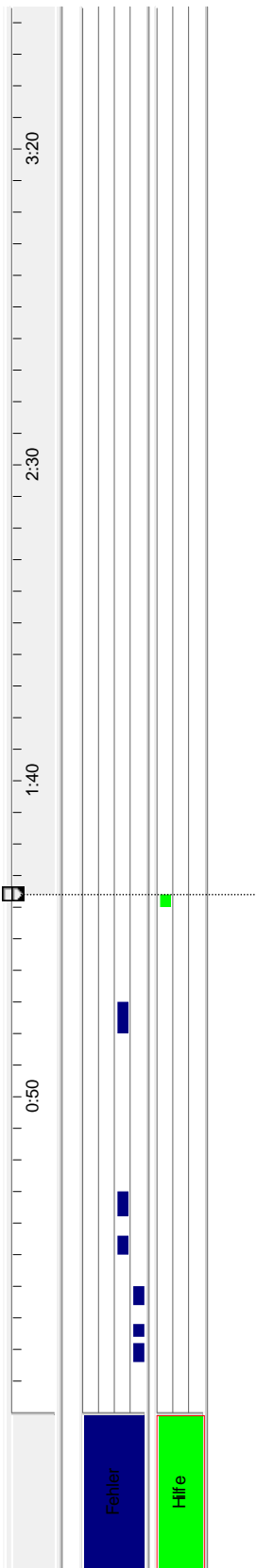
Matthias: Alter: 11;6, 6. Schulbesuchsjahr, CPM(RW)=23, PR=3, Ma(RW)=9		
Auto 1-1	Auto 2-2A	Auto 2-2B
Dauer: 0:25'	Dauer: 2:10'	Dauer: 0:24'
<p>The Gantt chart for Auto 1-1 shows a timeline from 0:00 to 3:20. A shaded area at the top indicates a duration of 0:25'. The task 'A-S' (red) starts at 0:00 and ends at approximately 0:15. 'Fehler' (blue) starts at 0:15 and ends at 0:25. 'Hilfe' (green) starts at 0:25 and ends at 0:30. A small square marker is located at approximately 0:05 on the timeline.</p>	<p>The Gantt chart for Auto 2-2A shows a timeline from 0:00 to 3:20. A shaded area at the top indicates a duration of 2:10'. The task 'A-S' (red) starts at 0:00 and ends at approximately 1:45. 'Fehler' (blue) starts at 1:45 and ends at 2:10. 'Hilfe' (green) starts at 2:10 and ends at 2:20. A small square marker is located at approximately 0:05 on the timeline.</p>	<p>The Gantt chart for Auto 2-2B shows a timeline from 0:00 to 3:20. A shaded area at the top indicates a duration of 0:24'. The task 'A-S' (red) starts at 0:00 and ends at approximately 0:15. 'Fehler' (blue) starts at 0:15 and ends at 0:24. 'Hilfe' (green) starts at 0:24 and ends at 0:30. A small square marker is located at approximately 0:05 on the timeline.</p>

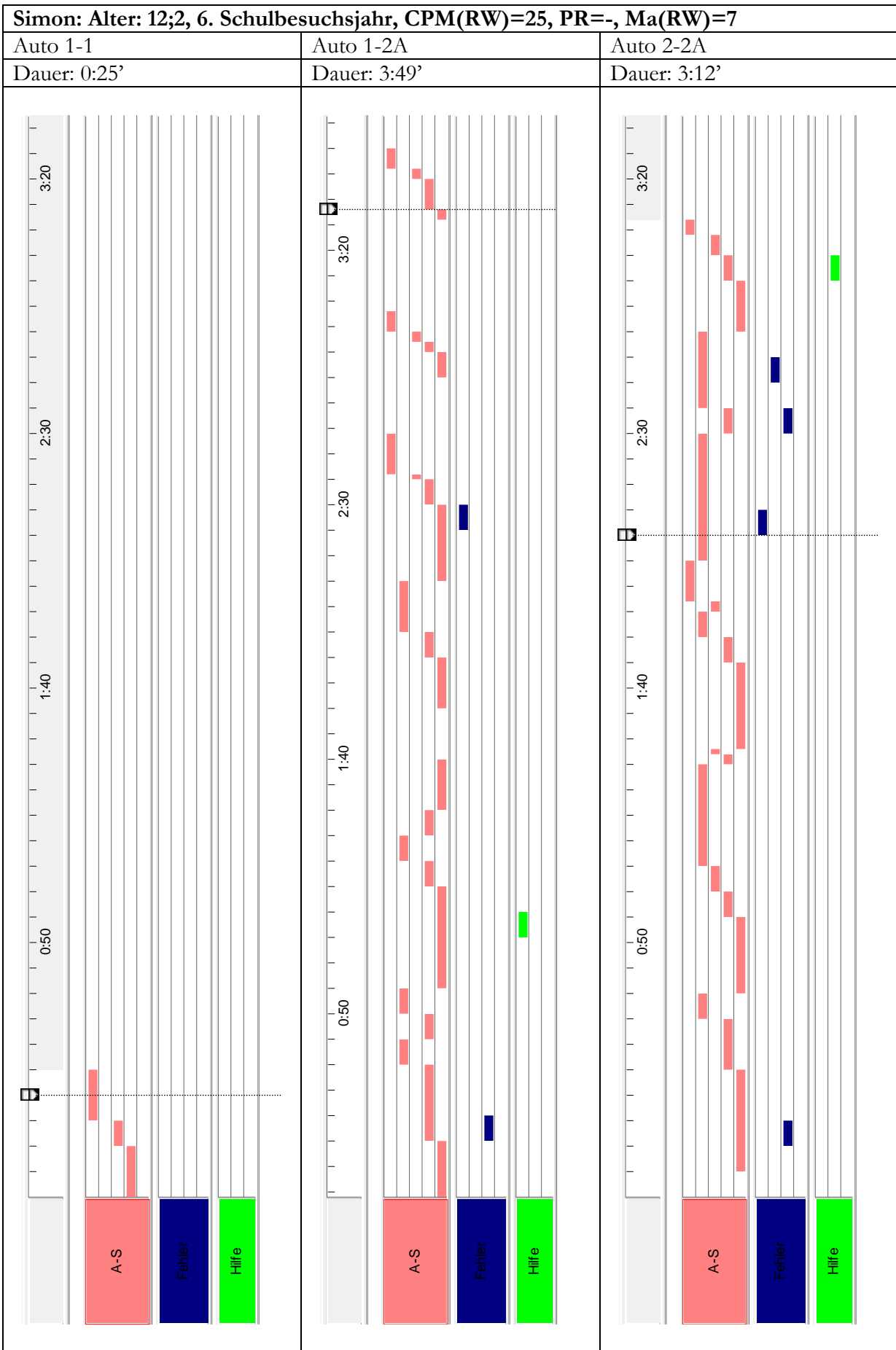
Matthias: Alter: 11;6, 6. Schulbesuchsjahr, CPM(RW)=23, PR=3, Ma(RW)=9		
Auto 3-3	Schieb 3 A	Schieb 3B
Dauer: 0:52'	Dauer: 1:50'	Dauer: 0:50'
<p>Timeline for Auto 3-3 (Duration: 0:52'). The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A red block labeled 'A-S' starts at 0:50 and ends at approximately 1:15. A blue block labeled 'Fehler' starts at approximately 1:15 and ends at approximately 1:40. A green block labeled 'Hilfe' starts at approximately 1:40 and ends at approximately 1:52. A small square marker is at 0:50.</p>	<p>Timeline for Schieb 3 A (Duration: 1:50'). The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A blue block labeled 'Fehler' starts at approximately 1:15 and ends at approximately 1:30. A green block labeled 'Hilfe' starts at approximately 1:30 and ends at approximately 1:50. A small square marker is at 1:40.</p>	<p>Timeline for Schieb 3B (Duration: 0:50'). The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A blue block labeled 'Fehler' starts at approximately 1:15 and ends at approximately 1:30. A green block labeled 'Hilfe' starts at approximately 1:30 and ends at approximately 1:50. A small square marker is at 0:50.</p>

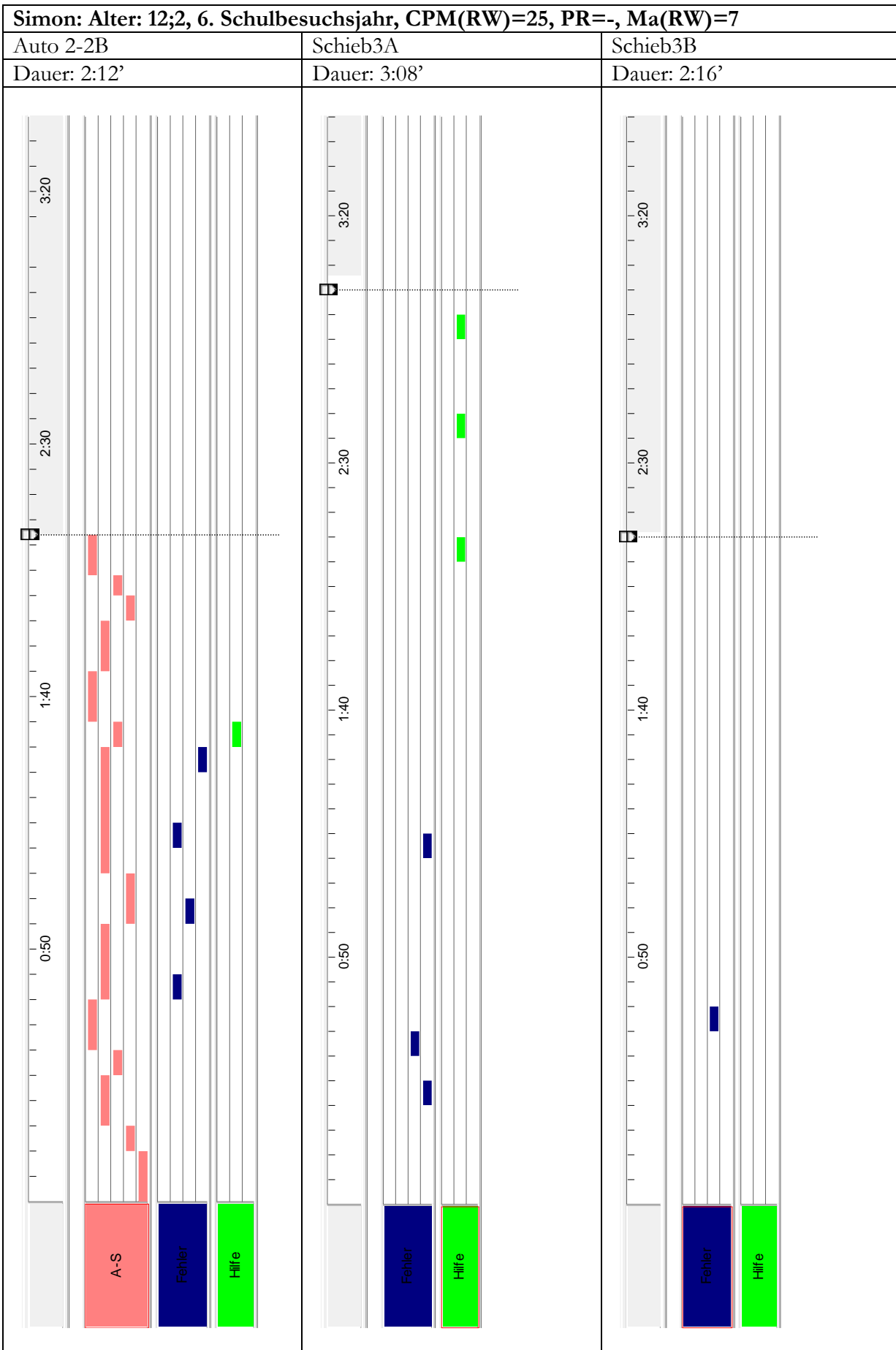
Jelena: Alter: 11;6, 6. Schulbesuchsjahr, CPM(RW)=15, PR=1, Ma(RW)=7		
Auto 1-1	Auto 1-2A	Auto 1-2B
Dauer: :'	Dauer: 1:35'	Dauer: 0:28'
(Clip kaputt!)	<p>The Gantt chart for Auto 1-2A shows a vertical timeline from 0:50 to 3:20. A task bar for 'A-S' (red) starts at 0:50 and ends at 1:40. A task bar for 'Fehler' (blue) starts at 1:40 and ends at 2:00. A task bar for 'Hilfe' (green) starts at 2:00 and ends at 2:15. A small square marker is positioned at the 1:40 mark on the timeline.</p>	<p>The Gantt chart for Auto 1-2B shows a vertical timeline from 0:50 to 3:20. A task bar for 'A-S' (red) starts at 0:50 and ends at 1:10. A task bar for 'Fehler' (blue) starts at 1:10 and ends at 1:20. A task bar for 'Hilfe' (green) starts at 1:20 and ends at 1:30. A small square marker is positioned at the 1:10 mark on the timeline.</p>

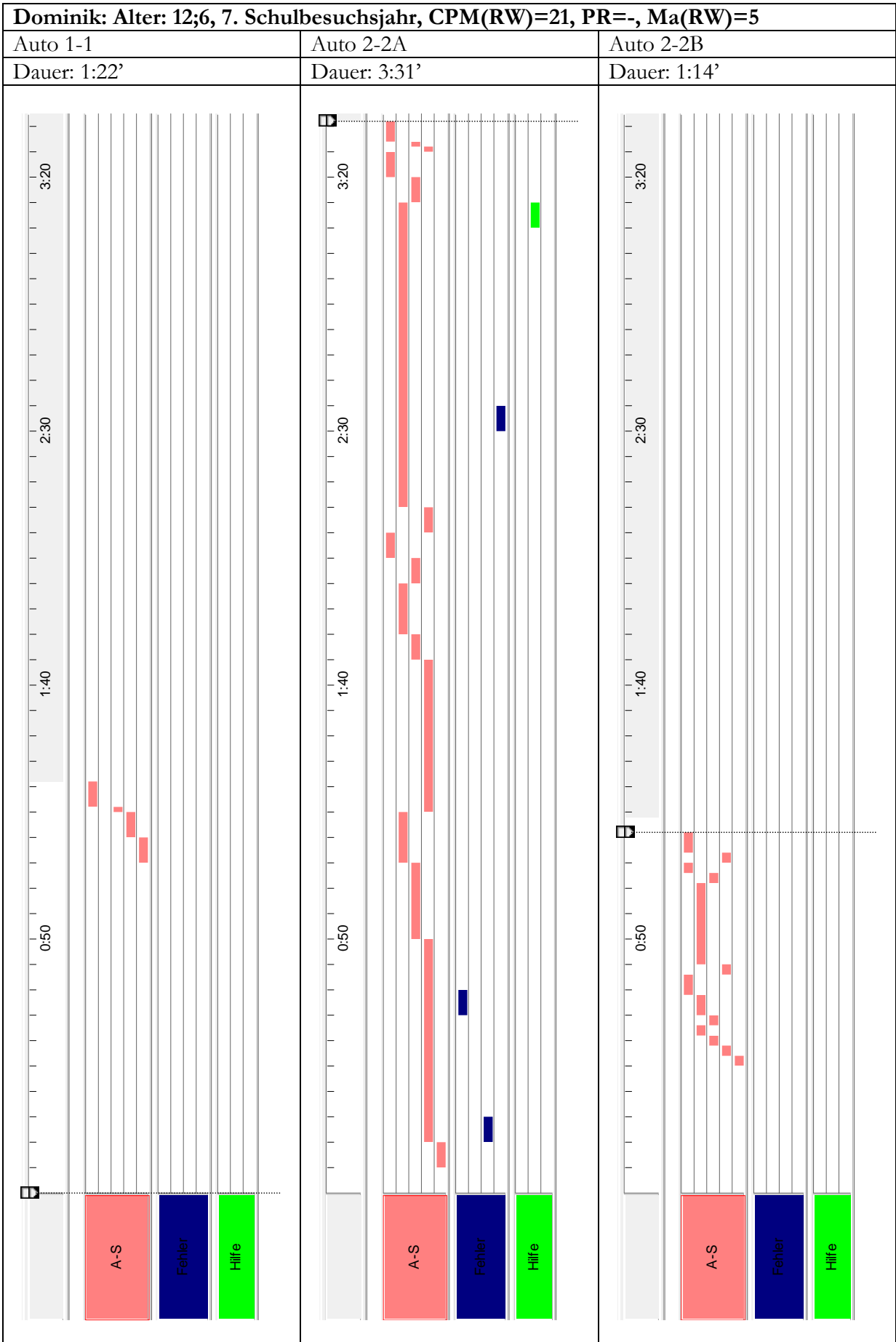




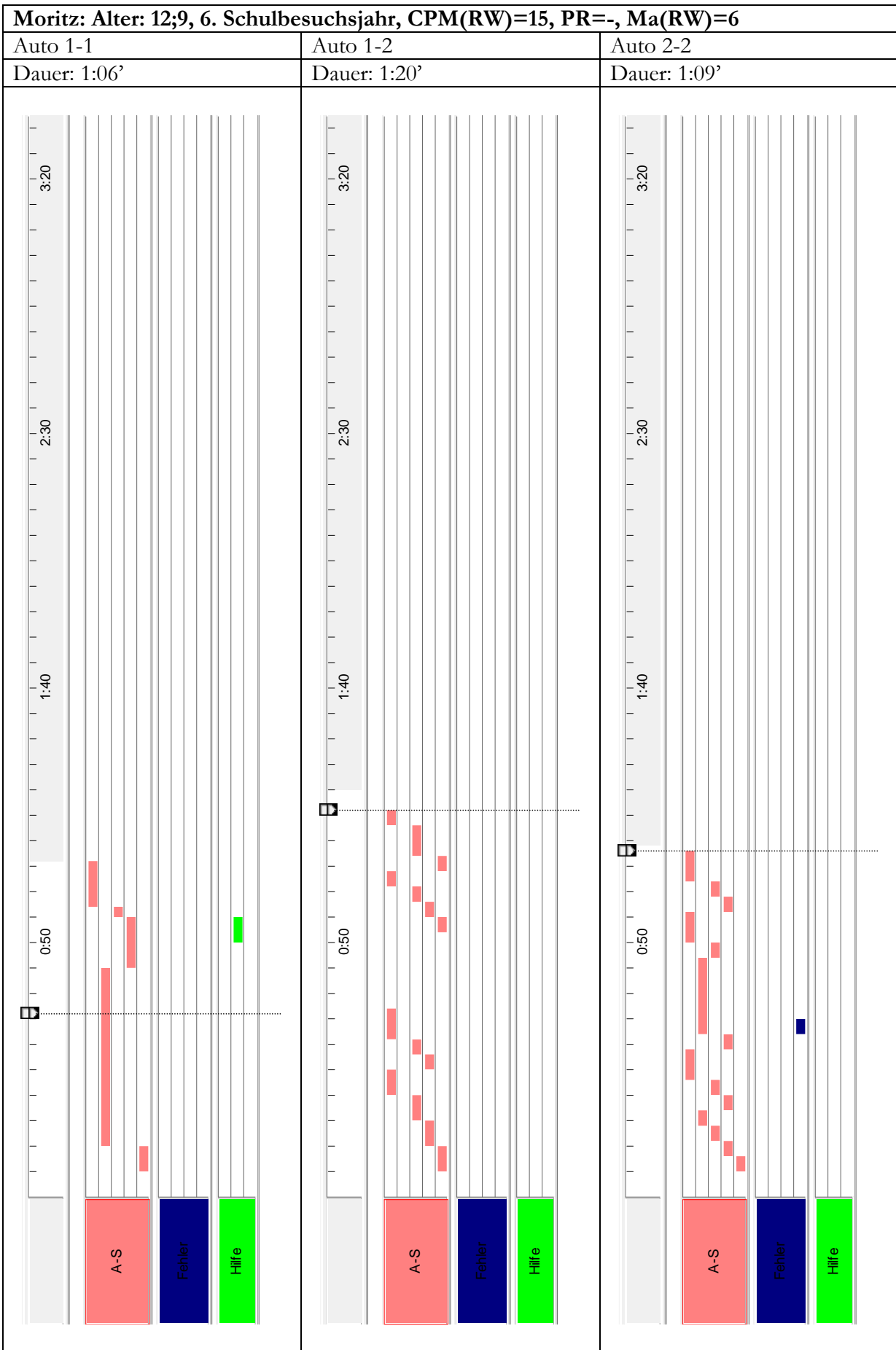
Florian: Alter: 11;10, 6. Schulbesuchsjahr, CPM(RW)=(5), PR=-, Ma(RW)=5		
Schieb3		
Dauer: 1:22' abgebrochen!		
 <p>The chart displays a vertical timeline with a scale from 0:50 to 3:20. Two bars represent task durations: a blue bar for 'Fehler' (Error) and a green bar for 'Hilfe' (Help). The 'Fehler' bar spans from 0:50 to approximately 1:15. The 'Hilfe' bar spans from approximately 1:15 to 1:22. A small square marker is positioned at the 1:40 mark. A horizontal dotted line extends from the top of the 'Hilfe' bar to the 1:40 marker.</p>		

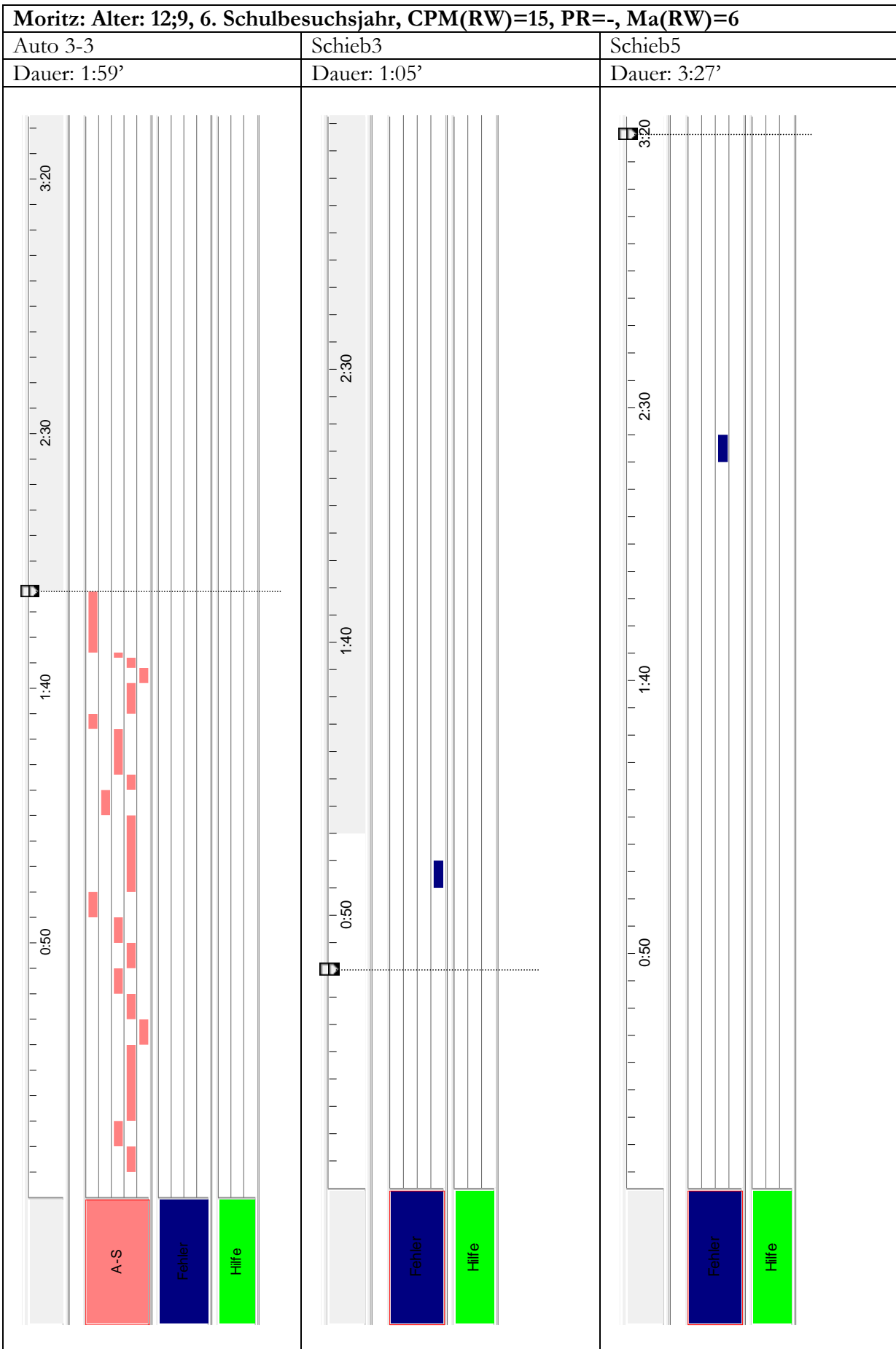


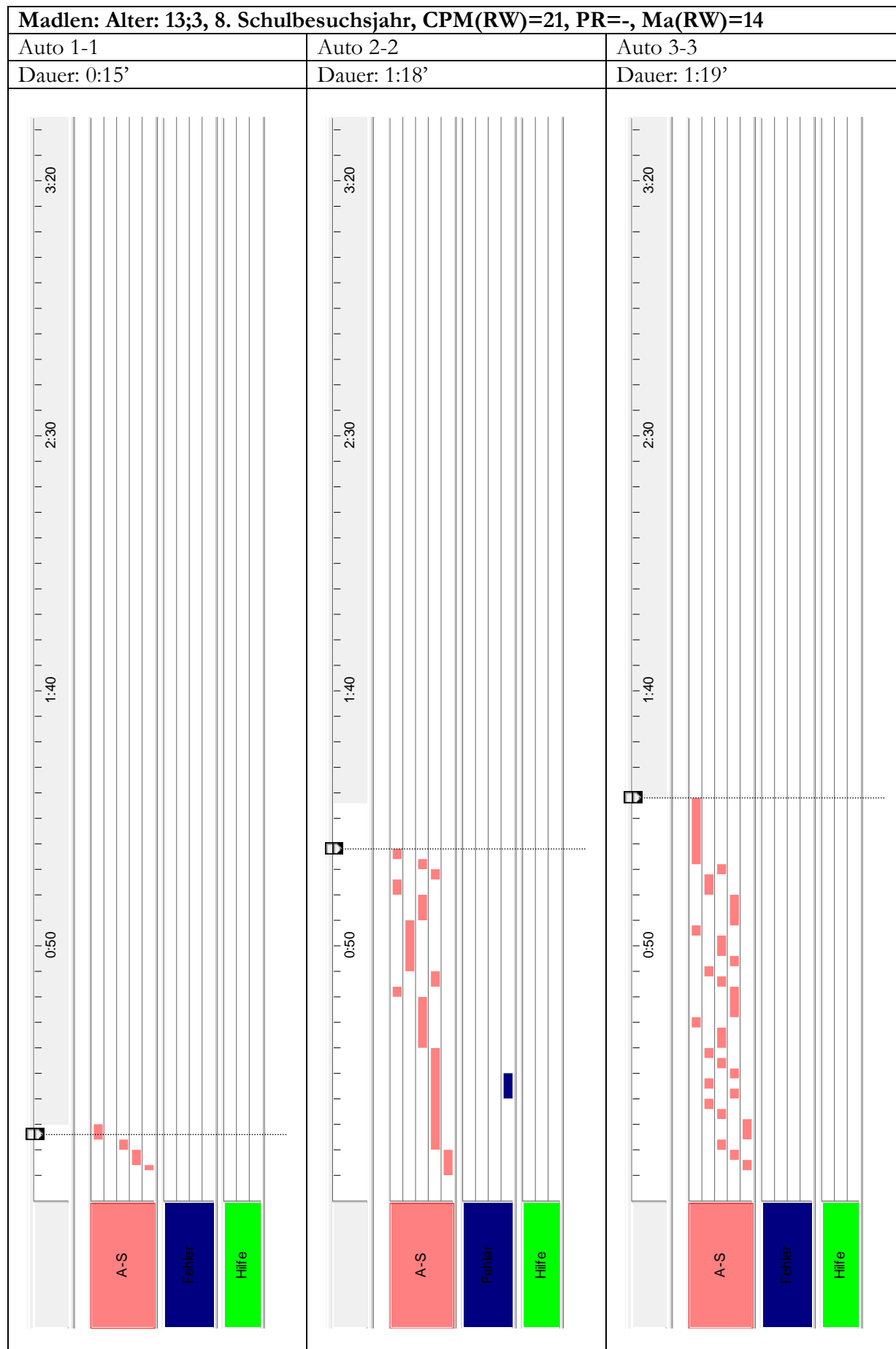


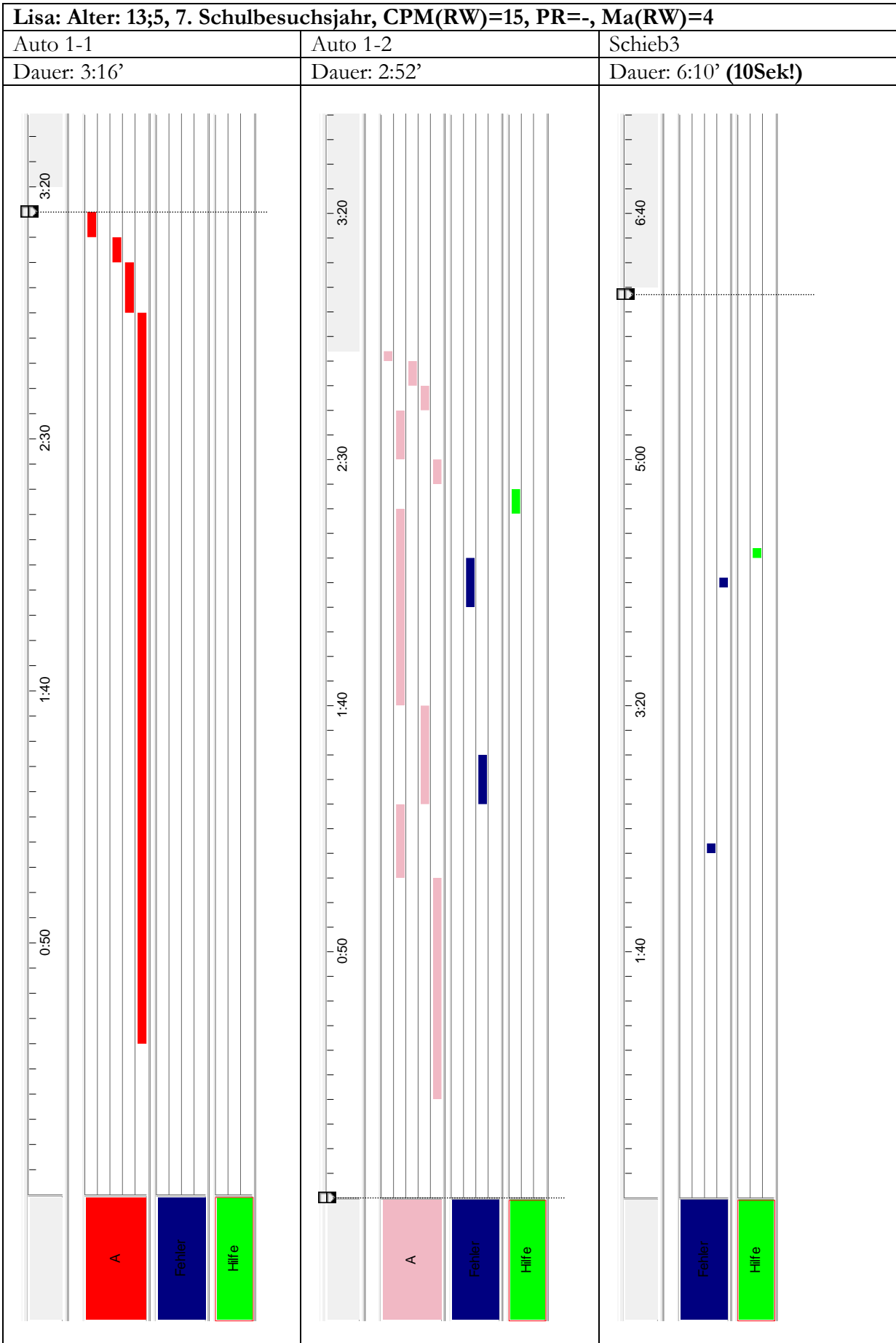


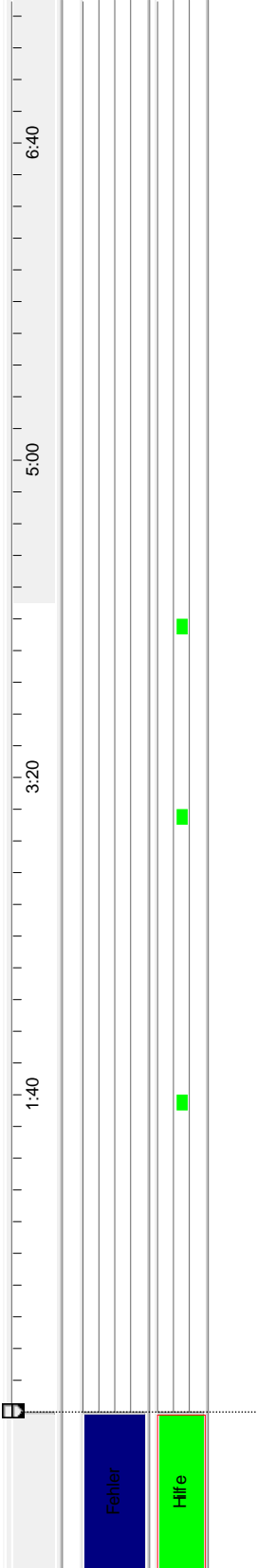
Dominik: Alter: 12;6, 7. Schulbesuchsjahr, CPM(RW)=21, PR=-, Ma(RW)=5		
Auto 3-3	Schieb3	
Dauer: 2:04'	Dauer: 5:08' (10 Sek.!)	
<p>Vertical axis labels: 0:50, 1:40, 2:30, 3:20</p> <p>Horizontal line at: ~1:50</p> <p>Legend: A-S (red), Fehler (blue), Hilfe (green)</p>	<p>Vertical axis labels: 1:40, 3:20, 5:00, 6:40</p> <p>Horizontal line at: 5:00</p> <p>Legend: Fehler (blue), Hilfe (green)</p>	

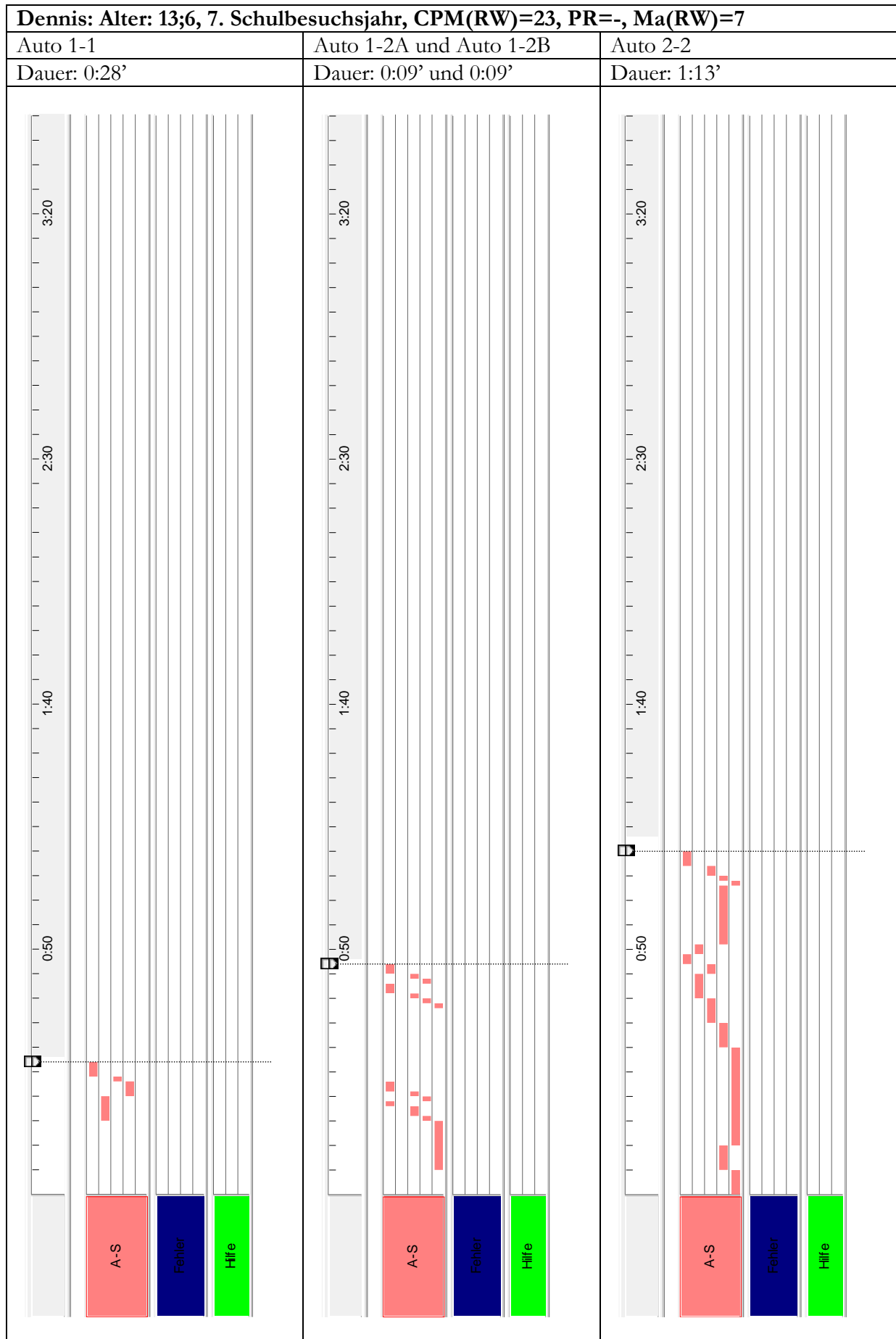




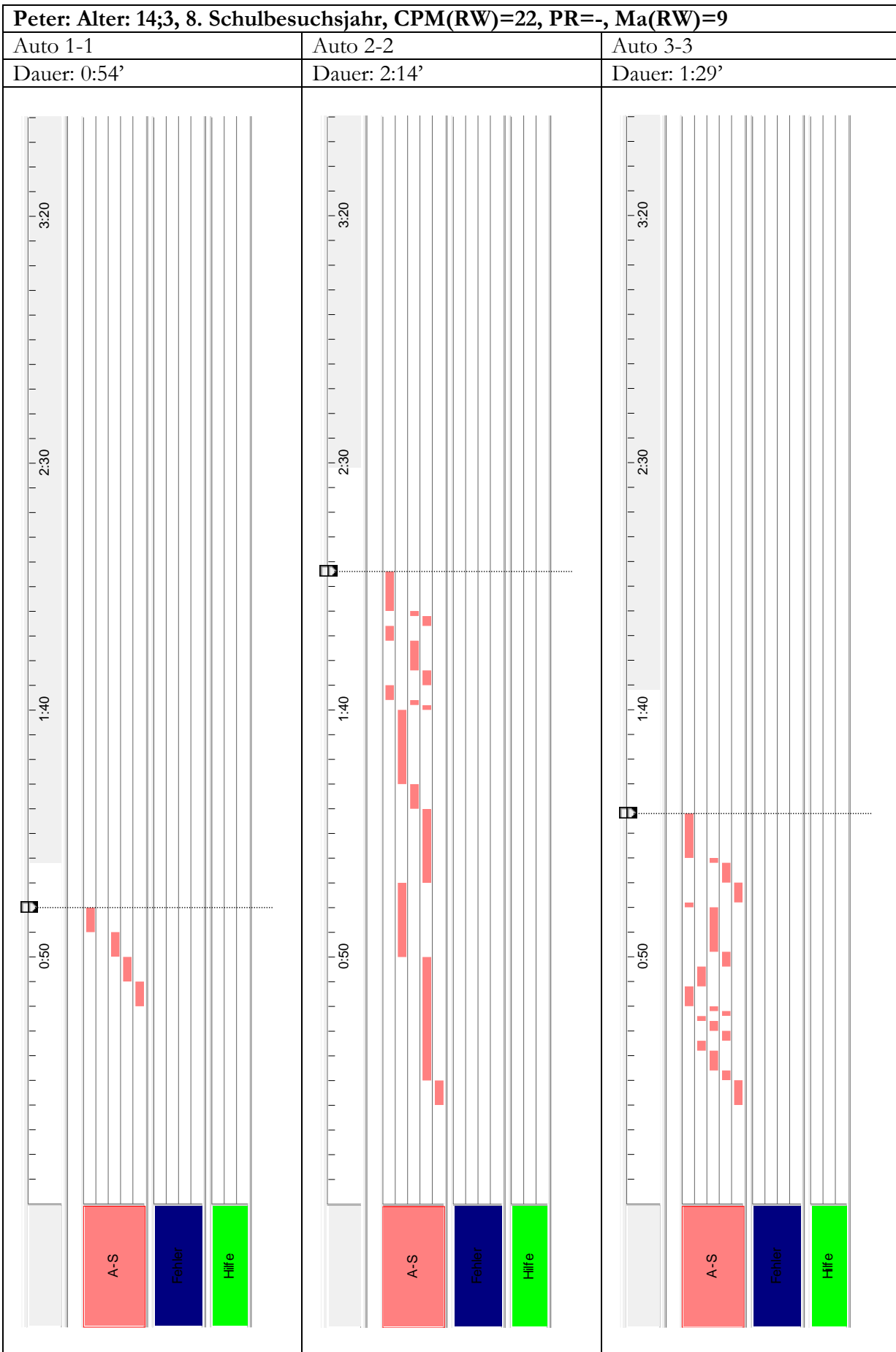




Lisa: Alter: 13;5, 7. Schulbesuchsjahr, CPM(RW)=15, PR=-, Ma(RW)=4		
Schieb3B		
Dauer: 4:10' (10Sek!)		
		



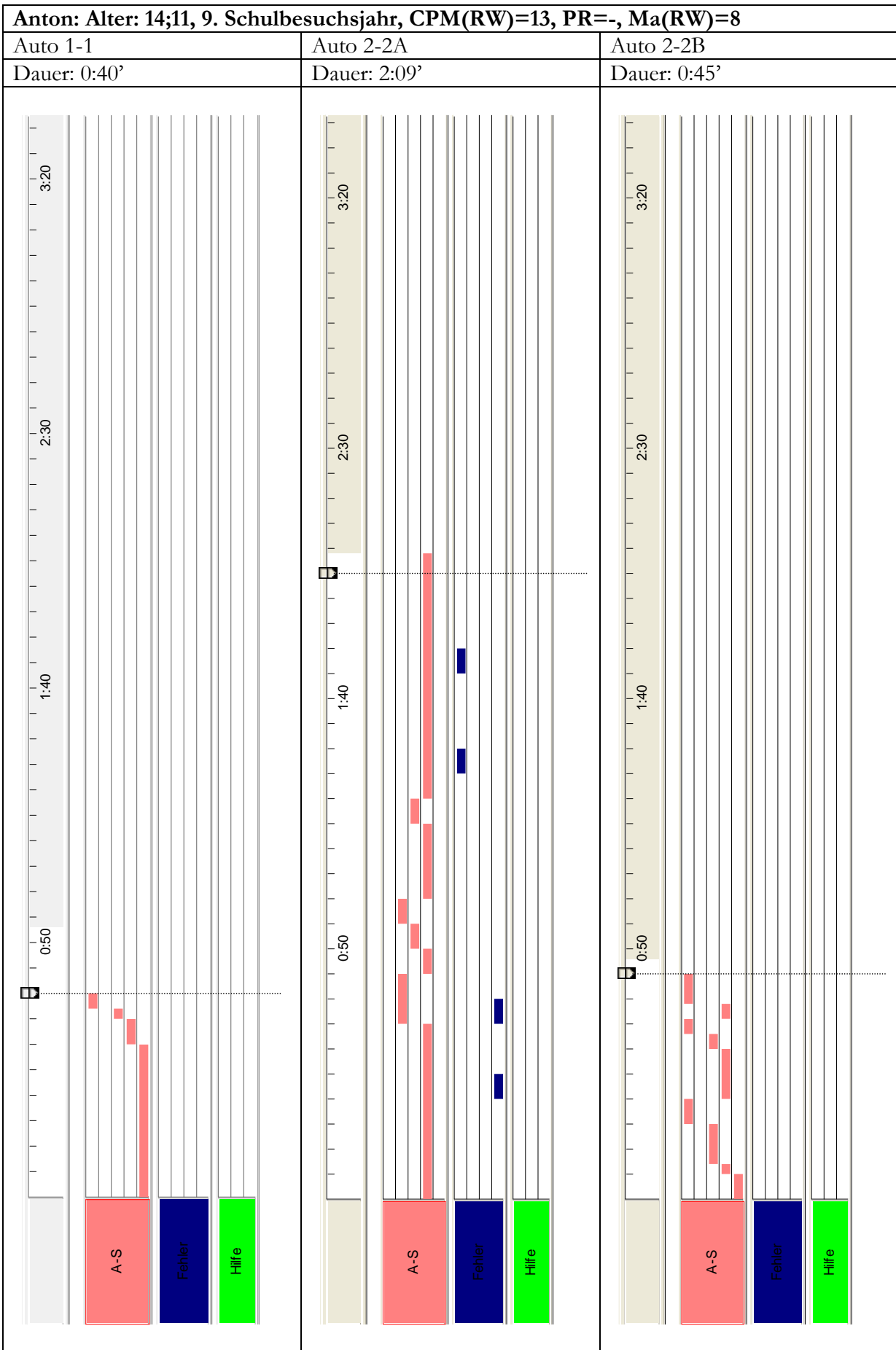
Dennis: Alter: 13;6, 7. Schulbesuchsjahr, CPM(RW)=23, PR=-, Ma(RW)=7		
Auto 3-3	Schieb3	Schieb5
Dauer: 1:18'	Dauer: 1:43'	Dauer: 3:42'
<p>Timeline for Auto 3-3 (Duration: 1:18'). The vertical axis shows time from 0:50 to 3:20. A red block labeled 'A-S' is present from approximately 0:50 to 1:10. A blue block labeled 'Fehler' is present from approximately 1:10 to 1:18. A green block labeled 'Hilfe' is present from approximately 1:18 to 1:25. A series of red squares is plotted between 0:50 and 1:10, showing a fluctuating pattern. A small square marker is located at approximately 0:50.</p>	<p>Timeline for Schieb3 (Duration: 1:43'). The vertical axis shows time from 0:50 to 3:20. A blue block labeled 'Fehler' is present from approximately 1:10 to 1:40. A green block labeled 'Hilfe' is present from approximately 1:40 to 1:43. A small square marker is located at 1:40, with a horizontal dotted line extending to the right.</p>	<p>Timeline for Schieb5 (Duration: 3:42'). The vertical axis shows time from 0:50 to 3:20. A blue block labeled 'Fehler' is present from approximately 1:10 to 1:40. A green block labeled 'Hilfe' is present from approximately 1:40 to 1:42. A small square marker is located at 3:42, with a horizontal dotted line extending to the right.</p>

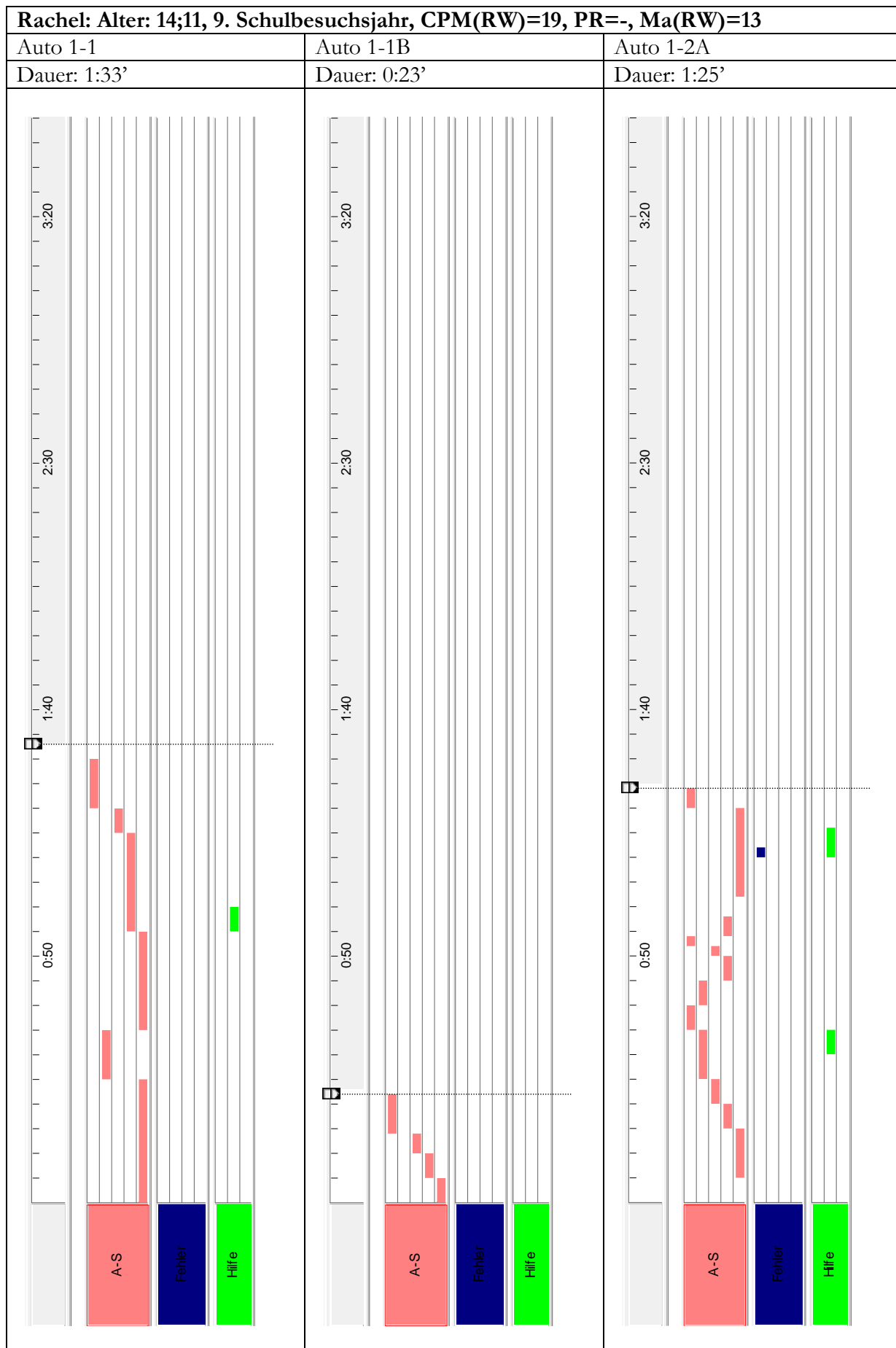


Peter: Alter: 14;3, 8. Schulbesuchsjahr, CPM(RW)=22, PR=-, Ma(RW)=9		
Schieb3	Auto 1-2Schieb5	
Dauer: 2:19'	Dauer: 2:14'	
<p>Timeline for Schieb3 (Duration: 2:19'). The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A small square marker is at approximately 1:15. A blue bar labeled 'Fehler' (Error) is located between 1:10 and 1:15. A green bar labeled 'Hilfe' (Help) is located between 1:20 and 1:25.</p>	<p>Timeline for Auto 1-2Schieb5 (Duration: 2:14'). The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A small square marker is at approximately 1:15. A blue bar labeled 'Fehler' (Error) is located between 1:10 and 1:15. A green bar labeled 'Hilfe' (Help) is located between 1:20 and 1:25.</p>	

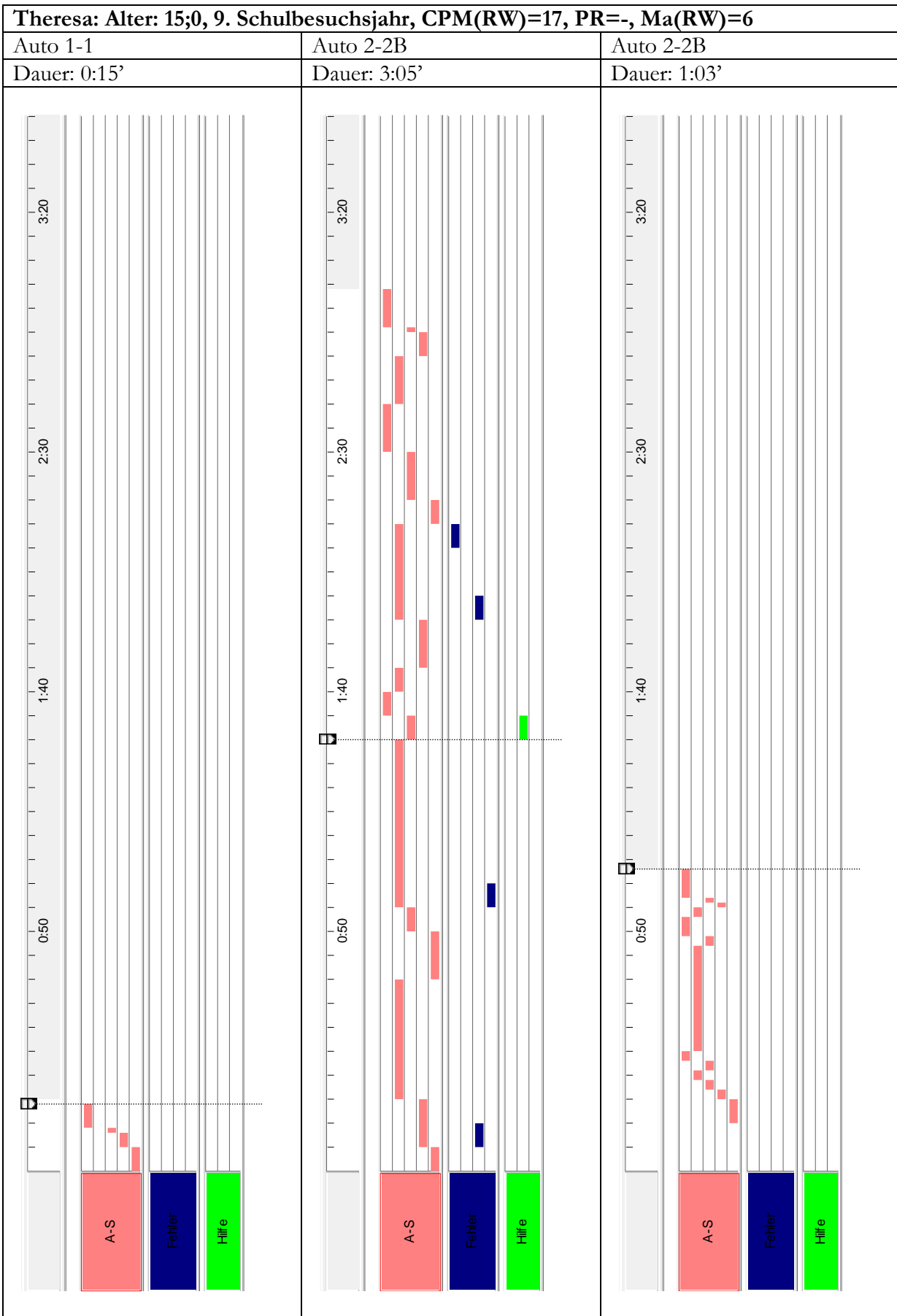
Julia: Alter: 14;4, 7. Schulbesuchsjahr, CPM(RW)=27, PR=-, Ma(RW)=11		
Auto 1-1	Auto 1-2	Auto 1-2B
Dauer: 0:20'	Dauer: 1:16'	Dauer: :'
<p>Timeline for Auto 1-1 (Duration: 0:20'). The vertical axis shows time from 0:00 to 3:20. A-S (red) starts at 0:20 and ends at 0:30. Fehler (dark blue) and Hilfe (green) bars are present from 0:30 to 0:40. A small square marker is at 0:20.</p>	<p>Timeline for Auto 1-2 (Duration: 1:16'). The vertical axis shows time from 0:00 to 3:20. A-S (red) starts at 0:20 and ends at 0:30. Fehler (dark blue) and Hilfe (green) bars are present from 0:30 to 0:40. A small square marker is at 0:20.</p>	<p>Timeline for Auto 1-2B (Duration: :'). The vertical axis shows time from 0:00 to 3:20. A-S (red) starts at 0:20 and ends at 0:30. Fehler (dark blue) and Hilfe (green) bars are present from 0:30 to 0:40. A small square marker is at 0:20.</p>

Julia: Alter: 14;4, 7. Schulbesuchsjahr, CPM(RW)=27, PR=-, Ma(RW)=11		
Auto 2-2	Auto 3-3	Schieb3 & 5
Dauer: 0:23'	Dauer: 0:54'	
<p>Timeline for Auto 2-2 (Dauer: 0:23'). The vertical axis shows time from 0:50 to 3:20. A dotted line marks the start at approximately 1:05. The 'A-S' bar (red) starts at 1:05 and ends at 1:28. The 'Fehler' bar (blue) starts at 1:28 and ends at 1:51. The 'Hilfe' bar (green) starts at 1:51 and ends at 2:14.</p>	<p>Timeline for Auto 3-3 (Dauer: 0:54'). The vertical axis shows time from 0:50 to 3:20. A dotted line marks the start at approximately 1:05. The 'Hilfe' bar (green) starts at 1:05 and ends at 1:28. The 'A-S' bar (red) starts at 1:28 and ends at 2:21. The 'Fehler' bar (blue) starts at 2:21 and ends at 2:44.</p>	<p>Jeweils ohne Fehler oder Hilfe</p>

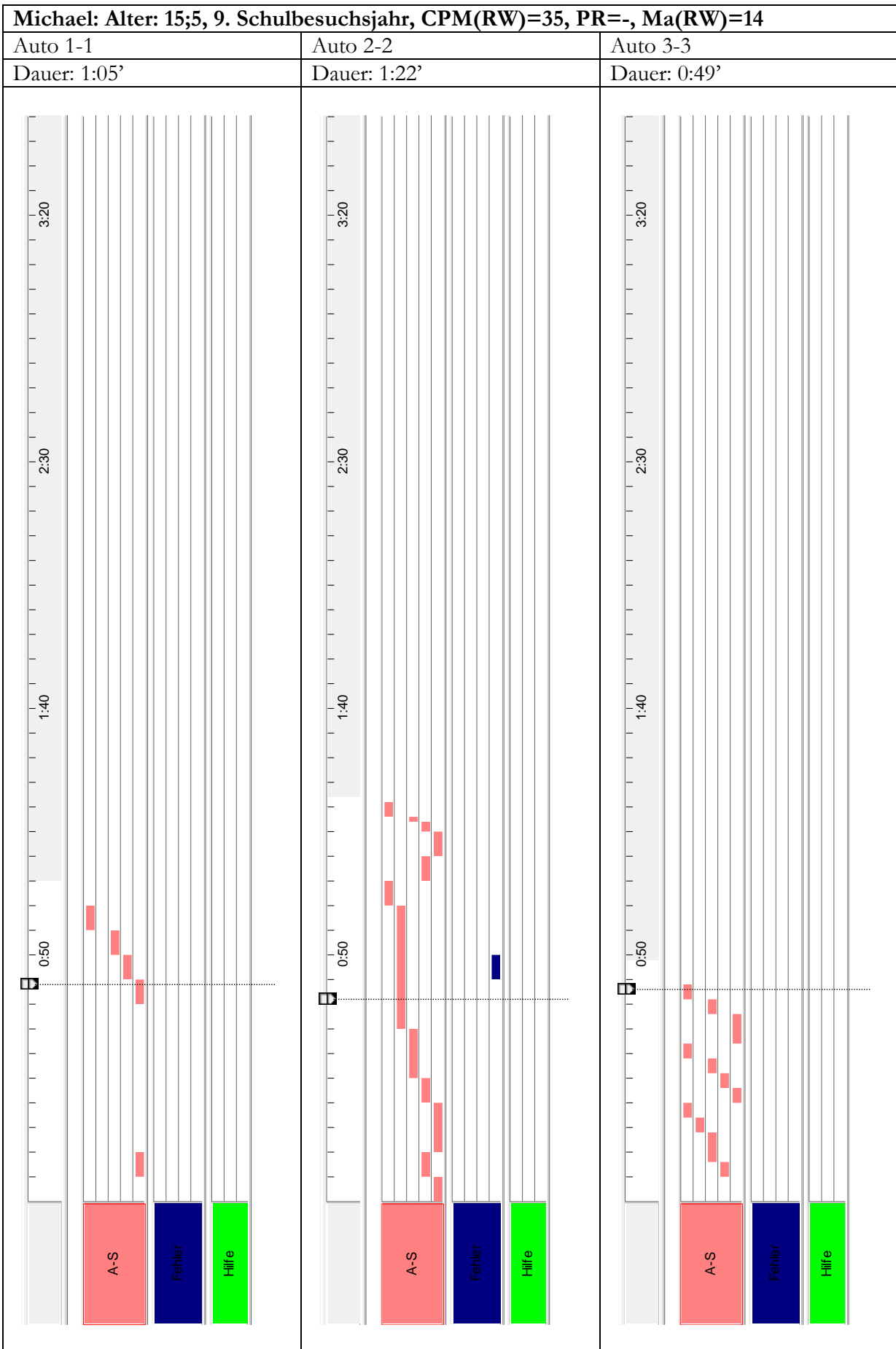




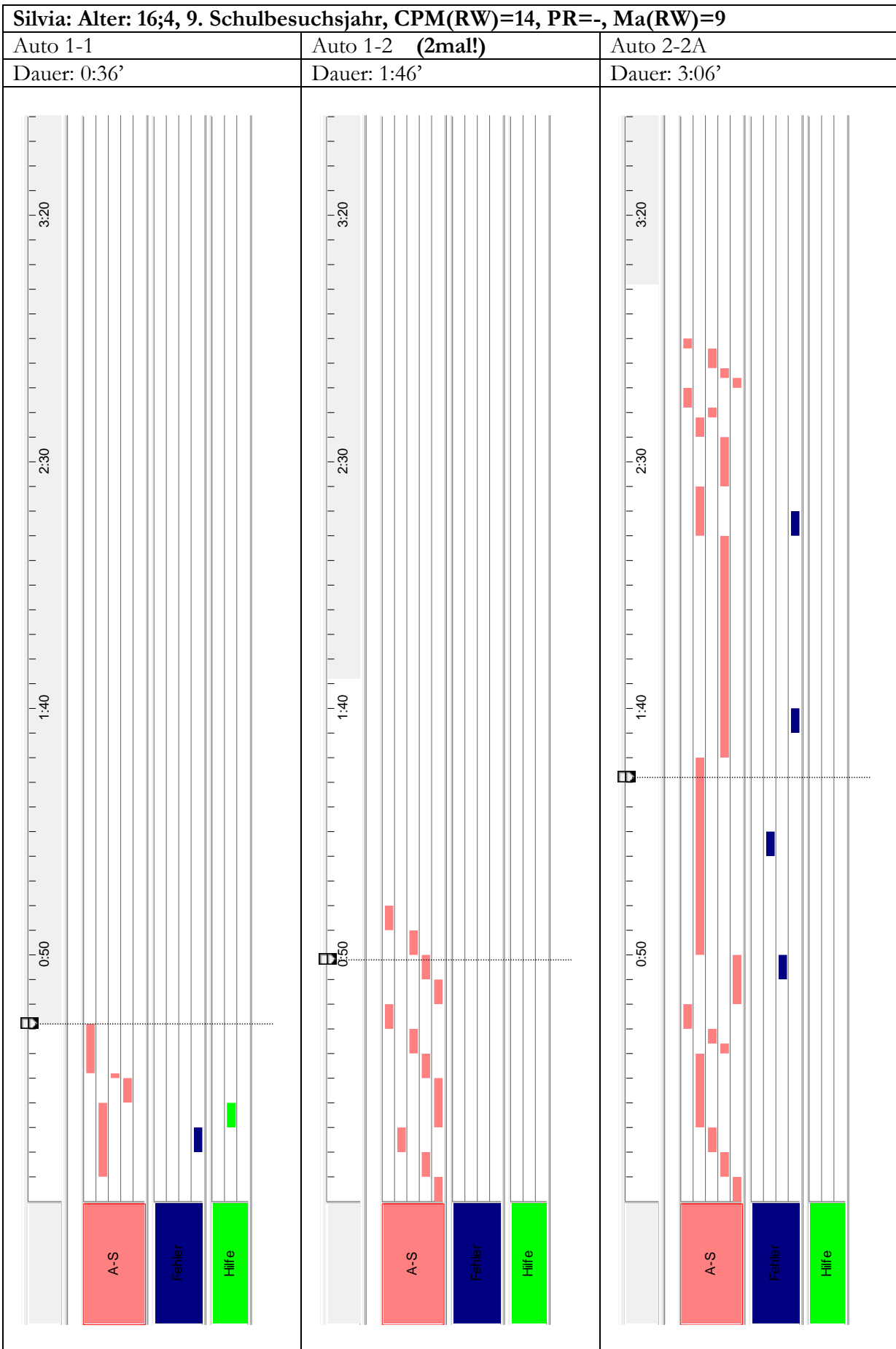
Rachel: Alter: 14;11, 9. Schulbesuchsjahr, CPM(RW)=19, PR=-, Ma(RW)=13		
Auto 1-2B	Auto 2-2	
Dauer: 0:49'	Dauer: 1:42'	
<p>Timeline for Auto 1-2B (Duration: 0:49'). The vertical axis shows time from 0:50 to 3:20. A dashed line marks the start at 0:50. The 'A-S' (red) activity consists of several small blocks between 0:50 and 1:40. The 'Fehler' (blue) activity is a single block between 1:40 and 2:30. The 'Hilfe' (green) activity is a single block between 2:30 and 3:20.</p>	<p>Timeline for Auto 2-2 (Duration: 1:42'). The vertical axis shows time from 0:50 to 3:20. A dashed line marks the start at 1:40. The 'A-S' (red) activity consists of several small blocks between 1:40 and 2:30. The 'Fehler' (blue) activity is a single block between 2:30 and 3:20. The 'Hilfe' (green) activity consists of several small blocks between 3:20 and 4:10.</p>	



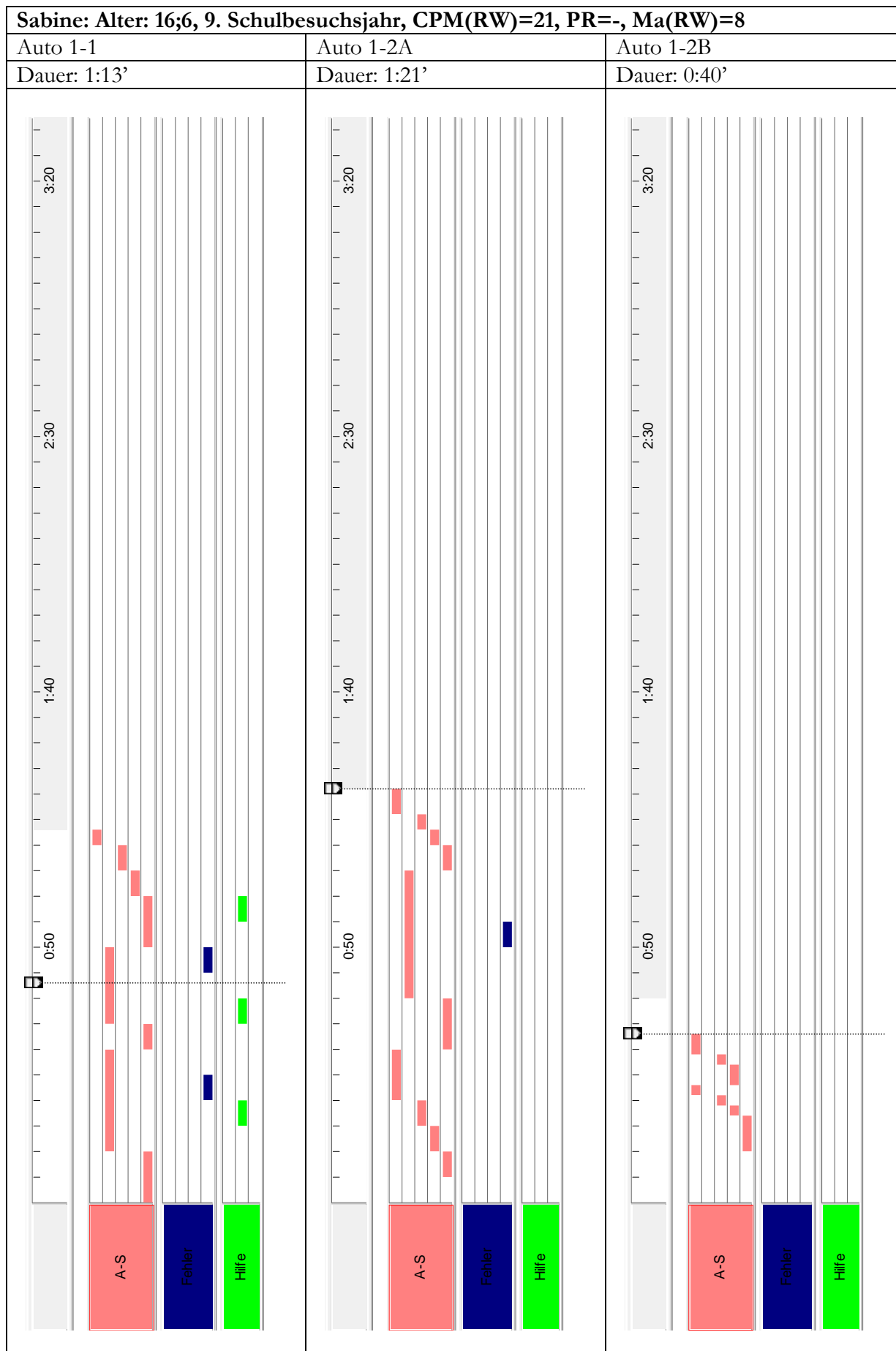
Theresa: Alter: 15;0, 9. Schulbesuchsjahr, CPM(RW)=17, PR=-, Ma(RW)=6		
Auto 3-3	Schieb3	
Dauer: 1:33'	Dauer: 2:05'	



Bastian: Alter: 15;6, 7. Schulbesuchsjahr, CPM(RW)=23, PR=-, Ma(RW)=13		
Auto 3-3	Schieb3	
Dauer: 2:17'	Dauer: 0:57'	
<p>The Gantt chart for 'Auto 3-3' shows a timeline from 0:50 to 3:20. A start marker is at 1:40. The chart is divided into three main categories: A-S (red), Fehler (blue), and Hilfe (green). The A-S category contains several red bars of varying lengths, indicating task durations. The Fehler category contains a single blue bar. The Hilfe category is empty. The total duration is 2:17'.</p>	<p>The Gantt chart for 'Schieb3' shows a timeline from 0:50 to 3:20. A start marker is at 0:50. The chart is divided into two main categories: Fehler (blue) and Hilfe (green). The Fehler category contains a single blue bar. The Hilfe category is empty. The total duration is 0:57'.</p>	



Silvia: Alter: 16;4, 9. Schulbesuchsjahr, CPM(RW)=14, PR=-, Ma(RW)=9		
Auto 2-2B	Schieb3	
Dauer: 2:00'	Dauer: 2:17'	
<p>Timeline for Auto 2-2B (Duration: 2:00'). The vertical axis shows time from 0:50 to 3:20. A grey bar at the top indicates the total duration. The task 'A-S' is represented by a red bar, 'Fehler' by a blue bar, and 'Hilfe' by a green bar. A small square marker is located at the beginning of the timeline.</p>	<p>Timeline for Schieb3 (Duration: 2:17'). The vertical axis shows time from 0:50 to 2:30. A grey bar at the top indicates the total duration. The task 'Fehler' is represented by a blue bar and 'Hilfe' by a green bar. A small square marker is located at the beginning of the timeline.</p>	



Sabine: Alter: 16;6, 9. Schulbesuchsjahr, CPM(RW)=21, PR=-, Ma(RW)=8		
Auto 2-2A	Auto 2-2B (1 Wo. später)	Auto 3-3
Dauer: 3:08'	Dauer: 1:20'	Dauer: 3:27
<p>The Gantt chart for Auto 2-2A shows a total duration of 3:08'. The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A horizontal dashed line is drawn at approximately 2:55. The chart is divided into three horizontal tracks: 'A-S' (red), 'Fehler' (dark blue), and 'Hilfe' (green). The 'A-S' track contains numerous red bars of varying lengths, indicating task durations. The 'Fehler' track has a few short dark blue bars. The 'Hilfe' track has two short green bars.</p>	<p>The Gantt chart for Auto 2-2B shows a total duration of 1:20'. The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A horizontal dashed line is drawn at approximately 0:55. The chart is divided into three horizontal tracks: 'A-S' (red), 'Fehler' (dark blue), and 'Hilfe' (green). The 'A-S' track contains several red bars. The 'Fehler' and 'Hilfe' tracks are mostly empty.</p>	<p>The Gantt chart for Auto 3-3 shows a total duration of 3:27'. The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A horizontal dashed line is drawn at approximately 3:15. The chart is divided into three horizontal tracks: 'A-S' (red), 'Fehler' (dark blue), and 'Hilfe' (green). The 'A-S' track contains many red bars. The 'Fehler' track has several dark blue bars. The 'Hilfe' track has one green bar.</p>

Sabine: Alter: 16;6, 9. Schulbesuchsjahr, CPM(RW)=21, PR=-, Ma(RW)=8		
Schieb3A	Schieb3B	
Dauer: 4:40'	Dauer: 1:32	
<p>Timeline for Schieb3A (Duration: 4:40'). The vertical axis is marked at 1:40, 2:30, 3:20, and 4:10. A grey bar at the top indicates the total duration. A blue bar labeled 'Fehler' (Error) spans from approximately 1:40 to 4:10. A green bar labeled 'Hilfe' (Help) spans from approximately 1:40 to 2:30. A small square marker is positioned at the top left, with a horizontal dotted line extending across the chart area.</p>	<p>Timeline for Schieb3B (Duration: 1:32). The vertical axis is marked at 0:50, 1:40, 2:30, and 3:20. A grey bar at the top indicates the total duration. A blue bar labeled 'Fehler' (Error) spans from approximately 0:50 to 1:40. A green bar labeled 'Hilfe' (Help) spans from approximately 0:50 to 1:40. A small square marker is positioned at the top left, with a horizontal dotted line extending across the chart area.</p>	